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References to nature: a meta-ethical approach to understanding biological facts in valuing and normativity

Doctoral dissertation, Philosophy

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1 Introduction

Moral theories and individual statements that involve references to nature, or more precisely references to natural biological facts, as relevant to human valuing or normativity often face significant challenges. Perhaps the most popular one is the "is-ought" objection. The claims that nature has any relevance to moral norms are often accused of deriving norms from facts. This is problematic not only because it is argued to be a logical fallacy. Even though no one would deny that nature has *some* relevance to the way we act and should act (where *some* is rarely elaborated), references to nature in moral contexts are said to undermine the role of human autonomy and reason. This thesis aims to make sense of the phenomenon of making references to nature by proposing an approach to capturing it. On the one hand, it inquiries both into why such references are made and what urges philosophers to make them by investigating parallels between biology and human valuing. On the other hand, it reflects and acknowledges points about differences between biological facts and values that lead others to object to such references. Based on analysis, a respective approach to understanding this phenomenon is proposed.

In philosophy, references to nature in moral contexts are a relevant and a frequent issue that can be approached from a multitude of angles, in a multitude of contexts and in relation to a number of different authors. This work refers to a selection of such perspectives including natural law theory. The primary focus is laid on authors concerned more directly with biology, evolution and empirical evidence, such as Michael Ruse's (2017) work. Ruse is an interesting example of reference to nature in discussing morality and values. More specifically, Ruse discusses the connection between morality, values and biology with reference to the theory of evolution. Ruse is not the only author who argues for a relation between biology and morality. However, philosophers involve such reference to varying degrees. Their theories spread across a spectrum ranging between a different level of commitment to, or primacy of, empirical evidence as opposed to philosophical concepts. For example, Ruse's theory seems to place in the foreground empirical evidence to which philosophical interpretations are attached. In contrast, for example, Philippa Foot's concept of "natural goodness" (2001), takes as a starting point philosophical concepts of Neo-Aristotelianism and adapts to it the interpretation of the empirical evidence. Similarly, natural law theory is a typical philosophical theory that does not engage deeply with science, although its central point is what is empirically observable. As a result, frequently, both philosophical and scientific points of view are in conflict.

Despite the fact that references to nature have different grades, they have in common some sort of recognition of parallels between biology and human decision-making in evaluative and normative contexts. The paradox concerning this issue is that, on the one hand, references to nature are inescapable and even obvious while, on the other hand, they remain controversial. This conflict in relation to references in nature will be first introduced on the example of natural law theory and H.L.A. Hart (1961) in the next sections.

Ultimately, the phenomenon concerning references to nature in moral contexts can be captured as the issue of the relation between fact and value, more specifically *biological* facts and values. In order to address this controversy and provide a suggestion to capture this relation and understand whether and how references to nature take place, it is necessary to peel off the various layers of this problem. Indeed, there are many issues at stake, some of which are very fundamental, and yet authors promoting references to nature are often very selective about them or bypass them altogether. The related problems are very complex in themselves.

Approaching the problem begins with examining the concepts of values as objective and subjective because precisely these concepts concern the understanding of whether and how values contain references to facts (objects). This necessary first step exposes important assumptions about values that impact how we perceive their relation to facts. A more obvious concern to the fact-value relation and to references to nature in general is the is-ought problem. In fact, the discussion of the is-ought problem can accurately represent the objections to making references to nature. Derivations of norms from facts are frowned-upon but frequently it is not precisely clear why. The analysis of this problem early in the thesis will allow to clarify what is problematic in such references and what characterises the differences between statements of fact and statements of value/norm. This step will emphasise that one should pay attention agent-dependence of this epistemological process of valuing and formulation of norms in making references to biological facts.

In order to comprehensively understand why references to nature are made and how the relation of fact and value should be understood, it is necessary to investigate empirical understanding of the relation of humans to the rest of biology as it has ontological character. However, involvement of such empirical evidence into philosophical discussions requires making clear qualifications about how this type of descriptive, factual account of the natural world should be understood in philosophical contexts. Finally, the relation of fact and value is very frequently discussed with reference to the concept of purpose (otherwise also referred to as

"teleology", although "purpose" is the preferred term). The work in this thesis will respect the relevance of the concept of purpose and discussions in this context will be provided.

The present work will make balanced references to both philosophical concepts and empirical evidence. Even though it is a philosophical and not a scientific thesis, references to empirical evidence are necessary given that the topic concerns human values' reference to *biological facts*. Biological facts are the types of facts which are understood in case of "references to nature" and they are nothing other than laws of nature investigated in sciences such as biology or evolution science. As will be argued, such references take place due to a certain ontological grounding of human beings in nature or fundamental relevance of nature to human beings, which will be referred to as *embedment in nature*. Human embedment in nature is characterised by the fact that human functioning is largely defined by biological design and this clearly is a subject-matter of sciences such as biology and evolution. Philosophers such as Ruse or Foot consider this central to their moral views which is what motivates their recognition of references to nature. However, such references or account of these references cannot undermine the nature and character of valuing which includes the feature that valuing is an agent-dependent epistemological process.

Thus, it is the goal of this work to explore precisely what this embedment in nature means for human valuing and human values and how it can explain references to nature in valuing and normativity which are epistemological processes that are carried out by agents. Moreover, the developed understanding and a respective approach to capture this relation, will be applied against works of various authors in order to place it in specific contexts and validate it.

1.1 The problem of reference to nature

The problem of fact-value relation is present in many diverse philosophical contexts. One may well introduce it by summoning a very prominent case, natural law theory, as criticised by H.L.A. Hart. In "The Concept of Law" (1961), Hart argues that natural law theory greatly "minimizes differences" between prescriptive and normative laws. Hart outlines the characteristics of nature, its descriptive laws as well as "natural teleology", i.e. the idea that organisms always develop in a certain direction. All these are regularities which can be observed, apprehended by "abstract mathematical formulations" and described: "Their connexion with observable events and changes lies in the fact that, from these abstract formulations, generalizations may be deduced which do refer to, and may be confirmed or falsified by, observable events. A scientific theory's claim to forward our understanding of

nature is therefore, in the last resort, dependent on its power to predict what will occur, which is based in generalizations of what regularly occurs" (1961, S. 184).

Nature is characterised by the presence of such regularities, laws of nature, which are clearly distinguished from moral normativity. This is especially evident with regards to its teleological character. "The difference is that on the teleological view, the events regularly befalling things are not thought of merely as occurring regularly, and the questions whether they do occur regularly and whether they should occur or whether it is good that they occur are not regarded as separate questions. On the contrary (except for some rare monstrosities ascribed to 'chance') what generally occurs can both be explained and evaluated as good or what ought to occur, by exhibiting it as a step towards the proper end or goal of the thing concerned. The laws of a thing's development therefore should show both how it should and how it does regularly behave or change." (Hart, 1961, S. 185). However, Hart understands that in promoting references to nature, natural law theory does not differentiate between the laws of nature which characterise the ontology, i.e. what *is* and characterises nature, and the normativity characteristic of human autonomy, rationality and purposeful human action.

Analysing Hart's understanding of the theory, Cristobal Orrego notes that "the ambiguity of Hart's formulation is that it can suggest (and so he seems at times to understand it) that in classical thinking there is confusion between what is factual and what is normative in the sense of normative that pertains to free (self-determining) beings" (2004, S. 292). This indeed is a clear message of Hart's critique of natural law theory. Orrego seems to interpret Hart's problem well. Hart himself states that "one of the difficulties in understanding a teleological view of nature is that just as it minimized the differences between statements of what regularly happens and statements of what ought to happen, so too it minimizes the difference, so important in modern thought, between human beings with a purpose of their own which they consciously strive to realize and other living or inanimate things" (1961, S. 185 - 186).

Hart further states that: "For the teleological view of the world man like other things, is thought of as tending towards a specific optimum state or end which is set for him and the fact, that he, unlike other things, may do this consciously, is not conceived as a radical difference between him and the rest of nature. This specific human end or good is in part, like that of other living things, a condition of biological maturity and developed physical powers; but it also includes, as its distinctively human element, a development and excellence of mind and character manifested in thought and conduct. Unlike other things, man is able by reasoning and reflection

to discover what the attainment of this excellence of mind and character involves and to desire it. Yet even so, on this teleological view, this optimum state is not man's good or end because he desires it; rather he desires it because it is already his natural end" (1961, S. 186).

It is plain that, in Hart's perception, the problem consists in the fact that according to natural law, what humans should do is what is natural for them and what is natural for them is understood as what is given by the descriptive laws of nature: "he desires it because it is already his natural end", where "natural end" is understood as an end defined by the teleological design of nature, or more precisely, biology. Hart fears that natural law theory equates the two phenomena pertaining to the biological world and to human action. There is an uneasiness in the understanding of the relation between facts that *describe* nature and its laws (such as purposeful biological design) even if they apply to humans, as well as norms that should guide and prescribe human action as formulated by humans. The latter are different types of laws than laws describing natural facts. They do not have a regular character, but their production is dependent on human autonomy and rationality. Due to the intimate relation between norms and values, this problem can be otherwise outlined with reference to values: Hart rightly emphasizes that we should not necessarily value what we *tend* to value naturally. We should value what is rational, which is not necessarily what is natural. In other words, this clearly refers to the is-ought problem: one should not derive normative conclusions from factual statements. Normative and evaluative laws pertaining to producing norms and values are different from laws of nature that describe facts.

In sum, in Hart's understanding, the natural law blurs the difference between descriptive laws of nature and moral norms which involve normative and evaluative statements. Since moral norms and values involve autonomous exercise of rationality and other mental capacities, in this understanding, human autonomy is clearly undermined. Hart's misunderstanding is that human nature as seen from the descriptive point of view is – and should be – what guides human action. According to this suggestion, there is no space for autonomous exercise of human rationality in order to autonomously guide their action. This, indeed, is a point that could be raised in case of other authors that promote references to nature, such as Michael Ruse or Philippa Foot which will be discussed in more detail in chapters 5 and 6. Ruse seems to suggest that evolutionary predispositions *define* final causes, also referred to as values, of organisms. In this context, the author does not even differentiate between final causes, so understood, in case of humans and other organisms (Ruse, 2017). Similarly, Foot (2001) is

objected to by Fitzpatrick (2000) for conflating elements of biological characteristics of organisms with moral normativity in what she calls “natural normativity”. In all three cases: Hart and natural law theory, Ruse, and Foot, the (alleged) problem concerns conflating, blurring differences or equating descriptive laws of nature pertaining to biological design of organisms such as plants, animals and humans with normative laws of human conduct based on values and formulated by humans.

In an answer to Hart, Orrego argues that natural law theory does not in any way equate laws referring to nature (descriptive laws of nature, such as biological characteristics of organisms, by Orrego referred to as “ontology” while anything that characterises nature as “ontological”, possibly because it describes what *is*) with laws present in moral normativity. As a consequence, Orrego also argues that the theory does not propose that what is natural is necessarily rational: “On the contrary, classical theory draws a clear distinction between ontological good pertaining to all that is, and moral good, pertaining to free action. Similarly, it does not confuse the use of such expressions as 'should' or 'law' in a normative sense, with their use, by analogy, in a descriptive sense” (2004, S. 292).

Orrego continues to clarify this differentiation: “It is not true that classical theory does not regard things that 'occur regularly' and those that 'should occur' as separate questions. Precisely the notion of nature, and that of end, enables classical theory to distinguish between events (regular of otherwise) that are 'good' (ontologically) or 'natural' for the being concerned from those that are not. Needless to say, it is good for a lion to devour a zebra (and 'bad' for the zebra). It is also true that lions regularly devour zebras and not vice versa. This empirical knowledge is what enables one to determine the nature of lions and zebras, and to know that zebras are 'natural' components in lions’ diets. This has nothing to do with a confusion between events that occur regularly and events that should occur or it is good that occur, because 'good' is relative to the nature of each thing (when lions devour zebras, both 'good' and 'bad' occur regularly). Under no circumstances may it be said that there is here a normative question of what 'ought' to occur or is 'good' in the realm of free action” (2004, S. 293). In other words, Orrego asserts that descriptive statements about things that occur regularly, such as those describing biology of organisms, (referring to things that are “natural” or “ontological”) are not at all equated with normative statements about “what 'ought' to occur or is 'good' *in the realm of free action*”, i.e. in case of moral normativity for which human autonomy and rationality are responsible. Moreover, by asserting that “'good' is relative to the nature of each

thing", he highlights the differentiation between animals and humans. For lions, 'good' may be equivalent to whatever describes the regularities of their biological nature. This is not so in case of humans whose nature also involves rational and autonomous decision-making.

This suggests that natural law theory has a defence against Hart's criticism. It is an inspiration for this work that will be outlined in the next section 1.3. It is beyond doubt that nature's descriptive laws (such as those present in biology) and "the realm of free action" (moral normativity) which concern human capacity to formulate and pursue their own norms and values are not the same. Indeed, what is at stake in this work concerns striking the balance between these two different types of statements and respecting their differences in terms of what their roles are and how they are formulated while acknowledging – and better understanding – their relation. It concerns investigating why do we make such references, what we should pay attention to while doing so and what this means for the relation of fact and value.

Even though controversial, reference to nature, or relevance of nature to morality and values, also has important grounds that should be explored. In this context, authors such Ruse and Foot (and, less explicitly, natural lawyers), in their theories, build on the fact that human action, including human valuing, is fundamentally dependent on embedment in biology as understood through study of biology and evolution. Both their theories refer to evolution theory although they attach different philosophical explanations to it. In case of both these theories, however, it is suggested that biology to some extent *is relevant* in understanding what is good for us although they differ in specific interpretations of this phenomenon. In fact, a certain reference to nature is inescapable also for Hart. He understands this as the "minimum content of natural law". Although the "minimum content of natural law" is relevant to law and morality, for Hart it consists of mere "truisms". "Reflection on some very obvious generalizations – indeed truisms – concerning human nature and the world in which men live, show that as long as these hold good, there are certain rules of conduct which any social organization must contain if it is to be viable. Such rules do in fact constitute a common element in the law and conventional morality of all societies which have progressed to the point where these are distinguished as different forms of social control" (1961, S. 188). It is the goal here to explore and appropriately formulate why and how nature, more precisely biology, is relevant to human valuing and normativity, considering the important differences in phenomena characterised by biological laws and phenomena characterised by human normativity and action.

In this context of exploring the connection between biology and human normativity and valuing, there is a central point that warrants reference to nature. It will be explored in the upcoming chapters and particularly in chapter 4. However, it is worth noting that this point is also observed by Hart. The author observes survival to be fundamentally relevant to the relation between nature and morality: "The actions which we speak of as those which are naturally good to do, are those which are required for survival; the notions of a human need, of harm, and of the function of bodily organs or changes rests on the same simple fact" (1961, S. 187). Survival is indeed of special value to us and it shows the intersection between laws of nature as well as moral norms and values which is relevant for understanding references to nature in moral contexts. "(…) survival has still a special status in relation to human conduct and in our thought about it, which parallels the prominence and the necessity ascribed to it in the orthodox formulations of Natural Law" (Hart, 1961, S. 187 - 188).

As Hart notes, norms and values depend on our autonomous and often rational value judgements because they are produced by agents who perform those value judgements. Our wishes and desires are examples of such value judgements. "Moreover, we can, in referring to survival, discard, as too metaphysical for modern minds, the notion that this is something antecedently fixed which men necessarily desire because it is their proper goal or end. Instead we may hold it to be a mere contingent fact which could be otherwise, that in general men do desire to live, and that we may mean nothing more by calling survival a human goal or end than that men do desire it." (Hart, 1961, S. 187 - 188). Thus, Hart suggests that survival is a "contingent fact" of a value judgement based on our desires and wishes. We, valuing agents, choose it autonomously and maybe even rationally. While being central, fundamental point that grounds humans in nature, the choice to pursue survival as a value depends on valuers and their act of valuing. This is true even though we may also naturally *tend to* value it, as other animals do ("For it is not merely that an overwhelming majority of men do wish to live, even at the cost of hideous misery" (Hart, 1961, S. 187 - 188)). (Note that the differentiation between autonomous choice that is an outcome of a normative exercise, and an in-born, perhaps even biological tendency to value something is very essential and will be further elaborated in this work). Even when the decision what to value is an autonomous one, (i.e. contingent on our autonomous, perhaps rational, value-judgement or evaluation) in pursuing or valuing these autonomously conferred values, we refer to nature.

Survival is a notion central to understanding reference to nature. It is the laws of nature that define *how* we can survive (in the "ontological" understanding of Orrego). Pursuing survival

means respecting and valuing laws of nature (captured in biological facts) because they govern this process entirely. Empirical evidence from the study of evolution demonstrates how deeply we are embedded in nature, a fact which Hart generally perceives as trivial. Biology defines the way our bodies work based on biological functions that characterise every bodily part and all have a certain purpose, in the sense of a biological function, as captured by laws of nature. Understanding the purpose of these functions, we can better know what supports them and what is detrimental to them and this knowledge is equally relevant for us and for values and norms we produce.

However, the importance of the value of life is evident also in our social structures, as Hart observes. It permeates our normative products and "is reflected in whole structures of our thought and language, in terms of which we describe the world and each other. We could not subtract the general wish to live and leave intact concepts like danger and safety, harm and benefit, need and function, disease and cure; for these are ways of simultaneously describing and appraising things by reference to the contribution they make to survival which is accepted as an aim" (Hart, 1961, S. 187 - 188).

Survival, conditions of which are entirely defined by laws of nature, is very influential regarding the concepts such as "danger and safety, harm and benefit, need and function, disease and cure". One could go so far as to state that we have such concepts *because* we wish to survive, as survival is a necessary condition for undertaking any autonomous action. Danger and safety, harm and benefit, need and function, disease and cure are all concepts that help us survive. This shows how the process of valuing in the case of such concepts (i.e. values defining what is danger and what is safety, harm, benefit, etc.), refers to laws of nature that enable survival. This phenomenon of relation of values to "ontological" truths about our nature (laws of nature define how to survive) and the nature of our world (survival is necessary for acting) requires further investigation in terms of their reference to nature. Importantly, this reference to nature is present because valuers autonomously decide to make it. This point clearly shows how relevant biological design is to our functioning, including valuing and normative exercise.

So, while Hart speaks only of the fact that it is human agents that produce values and norms, which is why he states that reference to nature is contingent on agent's judgement, it is nevertheless evident that there is another type of non-contingent, ontological, relation between laws of nature and our norms and values. This non-contingent and ontological characteristic is captured by the empirical study of the natural world to which humans belong. Both Foot and

Ruse make this relevance of such ontological characteristics central to their works. Hart, in contrast, is somewhat aware of this "ontological" relevance of nature to norms and values, even if he does not engage with this issue deeper. Although he refers to it as a "a common element in the law and conventional morality of all societies", he considers it obvious and unimportant enough to call it "truism". This is perhaps because in his report of this issue, Hart focuses on another feature of valuing: its autonomous character that leads to producing values. As a result, he considers the "ontological" relevance of nature as triviality. Nevertheless, this relevance or reference to nature is one of the two essential phenomena to be explored in this work, the second one being, at the same time, our autonomous and rational character of valuing.

1.2 The problem captured as the relation between fact and value (and norm)

The brief introduction of the exchange between Hart and natural lawyers (Orrego (2004) and Finnis (1980)) demonstrates that the controversy consists in balancing the reference to nature in normative contexts due to the concern that such reference undermines autonomous rational choice involved in normative considerations that involve formulation and pursuit of values and norms. As much as in natural law theory, also in theories of Ruse (2017) or Foot (2001), precisely this is their most contentious spot (as will be more specifically discussed in 5.2.2 and 5.2.3 respectively). This justifies the need to pinpoint an approach that can capture the relation between biological facts and values in human normativity while respecting the role of human autonomy and reason.

The core of the introduced problem in understanding why references to nature are made and when they should or can be made is the capturing relation between *biological* facts and values (and norms). Admittedly, emphasizing the role of human autonomy and reason marks an important difference between values and norms, otherwise referred to as evaluative and normative statements, and facts and factual statements. Values and norms require an agent capable of valuing and formulating respective norms. Without such agents, the content of values and norms, could not be produced, i.e. formulated[1]. The content of facts, such as regularities describing laws of nature, is discovered by agents rather than formulated. Such facts do not involve values and norms unless an agent capable of producing values and norms *attaches* them. Biology, i.e. the biological (or, in other words, evolutionary) design of all living organisms, and what follows, biological organisms other than humans, is characterised by

[1] While speaking about formulation of values and norms, it is here meant that «formulation», as a linguistic act is not only a linguistic exercise but is necessarily linked to the exercise where an agent autonomously and rationally produces values and norms which then can be linguistically articulated.

precisely such regularities and descriptive laws of nature. As such, biology and the rest of nature, without the presence of a valuers, cannot involve values and norms of moral or rational nature. Values and norms which are formulated by autonomous and rational agents and necessarily require such agency[2]. This outline should describe that both types of statements are logically and epistemologically different, as will be elaborated in chapter 3.

This differentiation between facts (such as facts in nature and biology) and values and norms, which are clearly dependent on rational and autonomous human agency, should be recognized and maintained. It is present and relevant also from the perspective of teleology, or purpose[3], which is present both in biology (more precisely, in biological, or evolutionary functions) and in human action involving valuing and reasoning. Application of this differentiation in the context of purpose will be further outlined in chapter 5. On the one hand, it is of a logical character because it concerns fundamental characteristics of these two types of concepts, also in terms of how their content is produced. More specifically, their content is either is formulated as in cases of values and norms or discovered as in case of facts describing laws of nature. On the other hand, it also has an epistemological character. This is because the logical delineation between factual and evaluative statements it is relevant in the processes of formulating not only the content of these two types statements but also their different functions in reasoning processes that lead to production of norms.

From this epistemological point of view, concerning how facts and values are involved in reasoning processes that lead to production of norms, the fact-value problem can also be linked with the is-ought problem. The is-ought problem, generally, is formulated as a principle that a norm or value cannot be derived from facts. As such, it concerns the *reasoning* and the correct way in which we *arrive* at production and formulation of values and norms (or, more precisely, how values and norms should not be formulated and where deduction from facts is involved). Moral norms need a rational valuer capable of producing such norms. They cannot be simply (without any further qualification) deduced from statements of fact, as Hume has famously pointed out in his passage (2011).This contrasts with the approach focusing on what values and norms are in the context of their contents.

[2] Admittedly, this understanding of values involves assumptions about the concept of a value. This will be discussed in chapter 2.

[3] This work will favour the term "purpose" over teleology, given that it is more neutral and can be separated from philosophical theories concerning the interpretation of teleology.

The is-ought issue has been taken very seriously. Indeed, many philosophers, for example Hilary Putnam (2002), recount that it has become associated with a *dualistic* understanding of the relation between fact and value. Dualism (or dichotomy, as Putnam calls it – this work assumes no significant difference between the two terms) "was conceived as an "omnipresent and all-important gulf"". This meaning that "to say that it was "omnipresent" is to say that this distinction was conceived of as something that could be applied to absolutely every meaningful judgment in absolutely every area" (2002, S. 11).

Putnam traces this fact-value dualism back to Hume. However, the logical point made by Hume is clearly linked to the epistemological understanding of the fact-value problem as suggested above. In contrast, dualism is a concept that does not only refer to the epistemological dimension of a problem but to its metaphysical dimension. It states that the two concepts are so distinct that they cannot be related in any way. There is a fundamental and "omnipresent" gap between them which clearly points towards a metaphysical interpretation. In chapter 3, it will be argued that the logical *differentiation* between the concept of a fact and the concept of a value which is relevant for the epistemological understanding of the fact value problem, i.e. is-ought problem, became an "omnipresent" metaphysical fact-value dualism. This is an inconspicuous shift, reasons for which are not entirely clear. While rejecting dualism, this work embraces a *differentiation*.

The dualistic understanding of the relation between fact and value, radical as it is, has become deeply anchored in philosophical thought. Dualistic interpretations of concepts are assumed and perpetuated in concepts, as will be discussed in chapter 2. There are many different examples of dualisms, a concept associated with Descartes, and many dualisms are interrelated. Nevertheless, as a radical concept it grossly oversimplifies understanding of the complex relation. Further, it is also linked with the "is-ought" problem. The fact-value dualism is connected to mind-body and subject-object dualisms. In order to truly explore the fact-value relation, it is important to address these dualisms and their implications. One very relevant consequence is the fact that the subject-object dualism implies an understanding of values as *either* subjective *or* objective. This is important because views of values as subjective or objective offer differing interpretations of values' relationship to facts. As will be shown in chapter 2, this either-or perception of values is an important bottleneck to understanding the fact-value relation. Chapter 6 will demonstrate this with reference to Ruse's understanding of values and will propose a reinterpretation.

Dualisms and their implications are indeed serious. The idea that the two concepts are so fundamentally distinct that there is no way in which they can be related seems grossly incapable of depicting the fact-value relation. It is a very oversimplified characterization that is not sensitive to the different *types* of perspectives on their relation. The fact-value relation needs a more precise and fine-grained account. Dualistic characterisations may be based on an important truth about a certain differentiation between concepts, however they are too general and blur other important characteristics.

Consequently, because the understanding of this dualism is so general and yet so widespread, there are many ways to counter the concept. Multiple authors that will be referred to in this work approach the task of defying these different related dualisms in various ways. In his address of the fact-value "dichotomy", Putnam demonstrates how the fact-value dualism has been reinforced and shows the shortcomings of dualism. Nevertheless, the thesis which he promotes against the dualism, concerning the "merging" of fact and value (Putnam, 2002) (Fuller, 1958), is not less ambiguous than the fact-value dualism itself. In many cases, these authors claim that facts and values are "merged" because they occur next to each other in various circumstances or in descriptions. Similar problems affect the positions of others, for instance Rolston (1975) and Fuller (1958).

Philosophers and scientists concerned with evolution studies sharply reject the idea of mind-body dualism (e.g. Ruse (2017), de Waal (2006), Wilson (2004) – (see 4.3.2)). Callicott (1985) argues against subject-object dualism (see 2.2.1 and 2.2.2). Putnam (2002), Fuller (1958), Rolston (1975) and others provide arguments against the fact-value dualism, largely in connection with the subject-object interpretation of values (see chapter 5). Understood in a radical way in connection with the is-ought problem, i.e. that a norm can never under any circumstances and with no justifications be derived from a fact, even the is-ought thesis can be defied, as Searle (1964) shows (see 3.3.2). However, similarly to Putnam, these authors leave open what precisely does it mean that they occur together, why they do, what is their role and whether this joint occurrence indeed is a sign of any meaningful relation. It is not enough to say that rejecting dualism means rejecting the idea that fact and value are separated by claiming that fact and value are "merged". Chapter 5 will address such statements, usually made in explicit relation to the concept of purpose and apply the approach outlined.

As ambiguous as they are, these statements aim to promote a relation between (biological) fact and value in order to counter radical dualistic theses about their separation, also linked to the is-ought problem. The reason for this is precisely the phenomenon that we do make references to nature, in a similar manner as natural law theory does. Moreover, such references seem

justified, as even Hart observes in his "minimum content of natural law" (1961). In other words, it cannot be denied that there is *a certain relation* between biology and valuing, biological facts and values, that results in and motivates such references. Chapter 4 will aim to explore and account for why such references are made by exploring both evident parallels in biology and valuing as well as reasons why such references are made. Partly, this will involve understanding the embedment of human in biology from the scientific perspective. This will offer a deeper engagement with natural phenomena that seem to motivate such references, than usually present in philosophical theories such as natural law theory. Indeed, terms of comprehending references to nature, it is important to understand human embedment in nature and the fundamental value of life in the context of what it means for understanding the relation of facts and values (and norms).

Thus, the major problem is the lack of meta-ethical tools and an appropriate approach to elucidating the relation between facts and values that involves *both* recognition of their differences, as promoted by Hart and the is-ought thesis, and their relations, as evident in references to nature. The lack of satisfactory means to account for references to nature is especially relevant given the popular emphasis on the importance of human autonomy and rationality as well as loud echoes of Hume's is-ought passage (2011). Ultimately, the vagueness with regards to this issue and a series of inconsistencies are also shortcomings on the part of Ruse, as chapters 5 and 6 will show. As a philosopher focused on evolution theory and its relevance to morality, he offers no clear answer to the is-ought or the fact-value problem, both of which are very relevant for his undertakings (e.g. Ruse (1984) or Ruse (2017)).

1.3 The inspiration for the proposed approach

In general, with regards to the fact-value relation in the contexts that refer to nature or biology, the arguments are very polarised. Some philosophers argue for an unbridgeable gap, others for merging. Neither approach provides statements that are precise enough because they do not differentiate between dimensions or perspectives (whichever term is more suitable) concerning this relation. Thus, they fail to capture *both* the difference and relation between such facts and values.

The proposal for dealing with this complex and multi-level issue of the relation between facts and values (and norms) is indeed suggested by those defending natural law theory. Natural lawyers such as Cristobal Orrego (2004) or John Finnis (1980) make hints towards approaching this problem from *epistemological and ontological* perspectives, although they do not elaborate

on the idea. The explanatory potential of this suggested approach will be embraced and more deeply explored in this work.

Before diving into this work, the differentiation between epistemological and ontological perspectives will be briefly introduced based on its outline by Cristobal Orrego (2004). Orrego begins by admitting that is often misunderstood about the approach of natural law theory that it equates two distinct kinds of laws: “the apparently 'normative-only' notions used ('should', 'good') might be understood in classical theory not only as normative but also as ontological. Classical theory uses an analogical notion of 'good', that is, that everything that is, insofar as it is, is 'good'. This means that 'being' is perfection of the entity. Then what occurs, insofar as it occurs in accordance with physical laws, may be said also to be what 'should' occur. Thus we say that a stone thrown in the air 'should' fall” (2004, S. 292).

Certainly, equating “ontological” with “normative” statements without sufficient emphasis on the role of reason, and respective address of the epistemological perspective of this relation, may lead to much confusion about natural law theory. Orrego’s characterization could be understood as suggesting that descriptive, empirical laws of nature are understood as normative (in the sense of human or moral normativity) and rational. This is precisely the frequent misunderstanding about the theory, as evident in Hart. However, according to natural law theory, as Orrego claims, this differentiation is maintained. “Ontological” normativity refers to descriptive laws of nature that apply to facts, biology. “Among these many senses there is one concerning what 'ought to be' in the sense of being in accordance with the nature and the 'ontological good' of an entity, a sense of 'ought' which is not normative, for it refers to beings that move from necessity, not freely” (Orrego, 2004, S. 295)

Laws of nature, such as those in biology, are clearly logically differentiated from laws of moral normativity that involve values and respective norms and, as such, have different epistemological characteristics and functions. This differentiation that natural lawyers claim to respect is indeed a very important one and will be examined in chapter 3, beginning with section 3.3.1. At the same time, natural lawyers recognize the parallels between or the *alignment* of laws of nature and laws of moral normativity in cases when what is rational and moral, is also natural. This alignment is not “given” but it results from the fact that agents autonomously value what is natural for them, in the biological sense. For example, we value life while it is also our biological predisposition to value life. This alignment is not *necessary;* it is not always the case that what is rational, is also natural. Indeed, Hart’s words that it is

contingent on human agency and use of reasoning capacity are quite accurate. The alignment, thus, may be contingent on human agency with regards to its actualisation. It is the human agent that brings it about because, *epistemologically*, it is the human agent that values such facts.

Nevertheless, Orrego claims that the alignment is not only normative (or epistemological because it is based on agent's autonomous valuing and normative exercises) but also *ontological* because it is linked with ontology of the natural world. Indeed, it is part of understanding the phenomenon to enquire into what motivates autonomous decisions to value biological facts because, until such understanding is provided, such alignment can only be understood as incidental. It will be argued that the reason why the valuer values it has to do with the *ontological* design of the world.

This differentiation between ontological laws of nature as well as laws of moral normativity allows natural lawyers to highlight the logical and epistemologically-relevant delineation between facts (such as biological predispositions, tendencies or functions) and values in cases of their alignment. Orrego states: "nevertheless, in human beings there is a strong relation (not confusion) between normative and ontological, since human beings realize their ultimate end (happiness/fulfilment) by freely chosen actions, which are morally good or evil (and so due or undue) depending on whether they lead to human fulfilment or not" (2004, S. 302). Orrego addresses the epistemological aspect of the problem, at the core of which is the autonomy in exercising moral normativity, as he states that human beings can "freely choose". This is precisely what the epistemological aspect of valuing and formulating norm, with reference to facts, concerns. Despite the ontological characteristics which may be manifested in *what* we value, the epistemological perspective concerns *how* we value and formulate norms, i.e. during autonomous exercises. Moral normativity, as an epistemological exercise, is entirely dependent on agent's reasoning and valuing, it is not "prescribed" by laws that refer to ontology, understood as laws of nature. However, this does not mean, that agents do not refer to such "ontological" laws.

Thus, Orrego responds to Hart's view as follows "In sum, Hart perceives the classical theory of natural law in a confused way. He is right in emphasizing that it is a teleological view of nature, where what is 'good' depends on the 'mode of being' of the entities. *This is a metaphysical question, not an epistemological one*, for the knowledge of the good cannot be deduced from mere theoretical knowledge of facts. However, Hart fails to grasp the *difference*

between 'ontological' and 'moral' goodness, believing as a result that classical theory confuses descriptive judgments with prescriptive judgements (or 'be' and 'ought') and minimizes the difference between the human person and irrational beings. In reality, classical theory *clearly distinguishes between the sphere of speculative reason and the sphere of practical reason without separating them*, and sees freedom as an essential requirement distinguishing persons from irrational beings and making a moral law required" (2004, S. 298).

In fact, the proposed approach is based on nothing more than the often-neglected difference. On the one hand, we reason and think about things and we understand concepts and statements with regards to their *functions and roles in reasoning*. On the other hand, we enquire about what things *are* and, for that purpose, focus on the *content* and characteristics that define their very content. The former understanding of a problem, focusing on how we use concepts and their functions in reasoning, has an epistemological character because it pertains to *formulation* of norms in reasoning processes. In this context of roles and functions in reasoning, the logical differentiation between different types of concepts becomes very pronounced. The latter focuses on the fundamental, defining characteristics of concepts available in their content and is an ontological issue. What the issue *is*, is irrespective of the way we *address* or *understand* it. While we need to have an epistemologically sound manner of addressing it, its ontological characteristics are independent from the way we address it. Epistemological and ontological approaches to problems are independent because they are two different dimensions of a problem. However, despite being different perspectives, they concern the same problem.

Based on this outline, an interpretation of positions of different authors that promote references to nature can be provided. It can be argued that, against frequent beliefs, such do not promote a *direct translation* of facts to normativity, or ontological laws to values and norms. The impression results from the fact that they fail to sufficiently highlight that this process of embracing biological facts as values is mediated by autonomous agents' employment of reason. Orrego suggests that this indeed is the implicit approach by emphasising the difference between speculative and practical reason (in the natural law terminology). In these terms, speculative, or theoretical reason, is a matter of *what is* (i.e. ontology), while practical reason applies to practical questions about *what to do*, i.e. which are directly relevant to valuing and formulation of norms. The fact that one can distinguish between theoretical and speculative reason and that one has freedom in exercising practical reason, as Orrego notes, refers to the epistemological understanding of the problem. In thinking and reasoning about what to do, i.e. in how we know

about what to do, we exercise the autonomy and rationality which characterise human agency. The relation of fact and value in terms of their ontological characteristics may influence the concept of what is reasonable to do. However, we are autonomous in reasoning and choosing what to do via formulating and producing values and norms.

Orrego certainly is not the only natural lawyer who employs this approach. One may also refer to the following quote of Finnis: "Such natural law, though sharply and cleanly distinguishable from laws of nature that govern entities and processes (including many aspects of human reality) independently of any understanding or choices, is factually (that is, ontologically: in the order of being) dependent upon natural reality that we find, not make" (2011, S. 85). Here Finnis equates "ontologically" with "factually", stating that moral principles, according to natural law theory, ontologically depend on *natural reality* (although by emphasising "sharp" difference to laws of nature, he emphasises the primacy of reason over observation of the natural reality). He then continues to draw the distinction with the epistemological understanding of the relation: "But epistemologically (that is, in the order of coming to know), the first principles of natural law are first principles of practical reason and, as such, are not dependent upon a prior adequate knowledge of human nature. Our understanding of them presupposes some knowledge of the factually given structures of possibility, availability, causality and realizability, but adds very significantly to that prior knowledge" (Finnis, 2011, S. 85).

Finnis claims that there is an ontological connection between normative moral principles that are based on an agent's valuing and reasoning, and natural reality, which consists of facts about biological functions and our embedment in nature. However, the presence of this connection does not impact the normative autonomy of agents. The author states that "(…) the first principles of natural law are first principles of practical reason" (2011, S. 85), they depend on reason (what is *desirable*) rather than on the knowledge of what is and biological facts (including what is *desired*).

The epistemological understanding focuses on the fact that it is valuers who value and decide how to value. It characterises the process of epistemological normative exercise such as formulation of moral norms. At the same time, the ontological characteristics are manifested in the epistemological understanding of these concepts. They are relevant to inquiring *why* agents value as they value. Applying this to the fact-value relation, one can understand that the epistemological relation of facts and values (and norms) is best understood in terms of the is-

ought problem because it is about *how we reason and deduce norms from facts and values*. In contrast, the ontological relation of facts and values is about a metaphysical, thus a more fundamental, relation between facts and values. It refers to the relation of the two concepts with regards to what they convey in their contents, as opposed to their types of statements and respective epistemological characteristics and functions.

This approach is very promising because it is fit for addressing different sticky points present in references to nature. It can offer a more precise and careful formulation of the fact-value relation that helps explain references to nature because it captures different aspects of this phenomenon. The epistemological dimension can help us highlight the logical difference between fact, value and norm as well as the role of the autonomous and rational agent in valuing and formulating norms. The ontological understanding of fact and value relation helps apprehend how it is that certain biological facts are relevant and aligned with the values we embrace and with the norms we formulate. Two chapters will be committed to expanding on each perspective. Chapter 3 will discuss the problem from the epistemological perspective which, as will be argued, is captured by the is-ought problem. Chapter 4 will be devoted to attempting to grasp the understanding of the fact-value relation from the ontological perspective, with qualified references to empirical statements. Chapters 5 and 6 will apply and further discuss the dual approach basing on the differentiation between epistemological and ontological perspectives from the perspective of purpose (chapter 5) and understanding of values as subjective and objective (chapter 6) respectively.

It should be highlighted that the analysis in terms of the ontological relation is tricky. The ontological relation is manifested in our embedment in nature in two aspects. First, it is the descriptive capturing our evolutionary heritage and explaining what our biological design is, including what we are predisposed towards. This perspective is largely the subject matter of science but is central to works of authors such as Ruse (2017) or Frans de Waal (2006) and even Philippa Foot (2001). However, due to the role and the nature of scientific statements, they should be interpreted carefully in philosophical context. For this reason, chapter 4 will differentiate and qualify types of inputs that are relevant to such analysis, such as statements about evolutionary framework as well as specific scientific evidence. Second, in order to further increase the transparency of the meta-ethical relevance of scientific statements, these statements will be differentiated from normative statements about our embedment in nature. The normative aspect concerns the reason why biological design is relevant to our valuing. This differentiation between descriptive and normative understanding will provide more viable

means to understanding the nature of statements made by sciences. In effect, it will offer more transparent interpretation of references to such statements, with regards to outlining the ontological relation of fact and value, than usually offered by philosophers concerned with understanding the relation of our valuing, normativity and biology.

Finally, based on Hart's (1961) quotes, it is evident that the relevance of the fact-value problem is also prominent in the context of the concept of purpose. The philosopher correctly observes that types of purposeful design are characteristic of both nature (biology) and human action. This is very relevant to the topic of this work and a more comprehensive explanation of the relation of fact and value, concerning both their differentiation and alignment, is possible only with reference to purpose. Moreover, certain issues that pertain to the concept of purpose are also relevant for understanding values in the context of their references to facts. Thus, applying the proposed approach to certain relevant issues that are evident in the context of purpose will address some remaining open questions with regards understanding fact-value relation.

1.4 Overview of the structure

Following the complex problems to be addressed in this work, the structure is designed accordingly.

Chapter 2. The first step consists in analysing and exposing problems about the concept of value (and norm) that concern the interpretation of its relation to facts. The understanding of the relation of fact and value is linked to the assumed interpretations of the concept of value. The discussion will focus on identifying problems pertaining to the dualistic perception of values, especially with regards to their understanding as subjective and objective. Due to the close link between subject-object and fact-value problems, this analysis is essential for exposing certain assumptions and preparing the ground for a non-dualistic reinterpretation of the fact-value relation.

Chapter 3. A dualistic understanding of fact-value relation is linked with a respective dualistic understanding of the is-ought problem. It could even be said that both closely related, and yet separate problems reinforce one another. The aim of this chapter is to attempt to clarify the is-ought problem, as much as possible for the purpose of the thesis. It analyses what the is-ought problem consists of and how it is related to the fact-value problem. The discussions highlight the logical and epistemological differentiation between the concept of a fact and a value as well as the agent-dependence of values. It is argued that this concerns the understanding of the fact-value problem from the epistemological perspective because it concerns reasoning and

formulation of norms. Analysis of such reasoning models leads to concluding when norms can be derived from facts. Moreover, the "alignment" of facts and values, the phenomenon when the valuer embraces biological facts as valued and derives a norm from it, exposes patterns that concern ontological relation of biological facts and values.

Chapter 4. The ontological understanding of the relation between biological facts and values allows to investigate why the alignment observed in previous chapter takes place, i.e. why valuers value certain biological facts and formulate respective norms. It focuses on the content-characteristics of facts and values, as opposed to looking them as logically and epistemologically different types of concepts. The ontological perspective focuses on what about the fundamental, defining characteristics of *what is* (i.e. of the natural world) defines the relations between biological facts and values. In this context, the empirical understanding of the world, including biology and evolution, accurately depicts our embedment in nature which can help explain *what* we value and *why* we value as we value. Empirical evidence is understood as only one type of input referring only to the *manifestation* of our embedment in nature. In other words, this is referred to as the *descriptive* understanding which bases on scientific inputs such as those concerning evolutionary framework and evolutionary evidence. There is also an important reason, which refers to the fundamental value of life (survival), why our embedment in nature *should* be recognized and why we should respect certain features of our biological design. This latter, *normative* perspective largely accounts for the alignment of fact and value: why valuers autonomously *chose* to value biological facts and formulate respective norms, as observed in chapter 3. It also accommodates opposite cases of rejecting biological facts.

Chapter 5. Analysis of the biological fact and value relation requires addressing it in the light of purpose because both biology and human decision-making and action are purposeful. This analysis follows the approach outlined in chapters 3 and 4: the differentiation between epistemological and ontological perspectives of the fact-value relation. Notably, the differentiation between fact and value as types of concepts implies a differentiation between two types of purpose: one characterised by biological facts and the other by values and norms in human decision-making and action. This enables us to maintain the logical differentiation between facts and values, according to the epistemological perspective, while allowing to make sense of their relation and alignment, according to ontological perspective also in the context

of purpose. The application of the approach in chapter 5 will test the approach against a number of relevant authors who both promote and discuss references to nature.

Chapter 6 closes the loop opened in chapter 2. The proposed approach to understanding fact-value relation confirms several elements of the interpretation of the concept of value, as discussed in chapter 2. With a clearer epistemological and ontological, understanding of the biological facts' relation to value and vice versa, it is possible to better non-dualistically grasp the understanding of values as subjective and objective. The arguments are made with reference to positions of Michael Ruse (2017).

1.5 Methodological note on the scope and approach

Many issues addressed here have an extensive philosophical heritage. Consequently, they have many possible interpretations. Among others, this is the case with the three kinds of dualisms: fact-value, subject-object, mind-body, as well as concepts of value and purpose. The first qualification with regards to the scope is the fact that all these complex issues are only addressed to the extent necessary, in order to elaborate the relation between fact and value. There is a certain fraction of discussions of these issues and a limited number of authors that can be considered. In order to achieve the goal of this work, such narrowing down is necessary.

Particularly striking is the extensive nature of the topic of values. The subject of values is not only massively complex and with a vast legacy, the topic of values has different philosophical foci. It should be noted that there are different types of values that have different characteristics. Values permeate our world, cultures, behaviour and acting in every sphere, also because the nature of our acting is purposeful and always guided by a certain value. The content of values is extremely diverse with respect to these different spheres of acting such as personal life, health, family, work, economy, hobbies. As there are different types of values, there can be different grades of the relation between different types of values and nature, biology. The values addressed here are those that manifest a certain reference to biological facts and are relevant to morality. In that context, the major philosophical discussions relevant are those concerning values as subjective and objective. Furthermore, the characterisation and scoping of biological facts is also an issue; however, it is emphasised here that such facts concern biological design relevant to our functioning.

Secondly, for each of these issues, even in a limited scope, there is a number of authors offering different arguments and interpretations. In order to increase the consistency and

comprehensibility of arguments, the work will usually focus on works of the same authors, which provide especially relevant basis for discussion on selected issues. The authors selected are not random; they all are considered to have provided very important contributions to the respective topics.

Finally, it should be noted that the approach here is to a certain extent aligned with contemporary natural lawyers' explanation of the methodological approach of natural law theory. Their suggestion is here embraced as a plausible way of explaining the understanding of the fact-value relation. While the arguments provided here can be indirectly understood as a defence of such a methodological approach, it by no means can be understood as justification of the moral theory presented by natural lawyers. There are several reasons for this. There is a difference between outlining and executing a certain approach; even with the same approach there is a multitude of ways in which it can be executed. Indeed, it is an immense difficulty to actually apply an approach and provide a moral theory and here no statement is made about the *execution* of this methodological approach. More specifically, this means that no statement can be made about the content of natural law theories, such as, for instance, Finnis' selection of basic goods. Moreover, there are also other aspects of natural law theory which would be seen incompatible with the arguments and findings of this work (such as, perhaps, Aquinas' and Finnis' natural law theory's traditional understanding of the origin of objective values). The approach outlined above with the help of Orrego (2004) is adapted, elaborated and applied in other contexts. Its central applications case are the works of authors such as Michael Ruse (2017), who is more directly and explicitly involved in applying the relation of biology and evolution to morality. The reference to Ruse becomes more evident from chapter 4. Chapters 2 and 3 discuss necessary clarifications that precede discussing Ruse's positions. They are highly relevant to Ruse's work, however, Ruse himself hardly addresses them (hence, there is very little reference to Ruse in chapters 2 and 3).

2 Values and references to facts: key concepts and problems

The importance of clarity about more and less crucial concepts is not just a recommended "good practice" principle. In this case, it constitutes a necessary first step of the analysis. The topic of this work has to do with a controversial issue in philosophy but also involves necessary reference to other heavily discussed concepts. Over many years, much has been written by various authors on the fact-value relation and on other relevant concepts. This can mean not only numerous interpretations but also a perpetuation of certain misleading assumptions.

By making a reference to another heavily disputed philosophical problem in the present section, this chapter will begin by outlining an important difference in perspectives on approaching moral questions (2.1.1). This differentiation between descriptive and normative approaches will be actively employed in chapter 4. After briefly outlining this as well as discussing the relation of values and norms (2.1.2), the analysis will focus on the concept of value as subjective (2.2.2) and objective (2.2.3). This analysis will attempt to clarify assumptions about the concept of values as subjective and objective and separate their dualistic elements (after having discussed dualisms in 2.2.1). The purpose of this is to expose how values have been perceived to be, or not be, related to facts and what elements of these views are unintelligible and should be rejected. The analysis involves spelling out and scrutinising different elements of the understanding of values as subjective and objective in order to arrive at a plausible preliminary interpretation of these concepts, to be confirmed in chapter 6.

The analysis and review of the assumptions about values as subjective and objective is an important step because it exposes and clarifies different and even untenable understanding about frequently used concepts. In consequence, it removes bottlenecks to analysis of value's relation to facts and allows to provide a more appropriate understanding of values as subjective and objective. It also exposes certain problems that will be relevant in further chapters. Misunderstandings that result from the lack of clarity about concepts are somewhat inherent to any form of communication. Many concepts simply are complex and can be understood in multiple ways. In many cases, such as that of subject-object dualism as will be argued, certain assumptions are so deeply rooted in philosophical concepts that they become taken for granted. Without clarifying fundamental assumptions, concepts become not only misleading but can also be understood differently by different readers. Communication is imperfect and we cannot hope that we can make every concept absolutely clear every time we use it; such hope is unrealistic. However, this does not mean that we should not pay attention to the manner in which we use them.

The consequences of a lack of clarity about concepts lead to misunderstandings and situations where philosophers talk past each other's arguments. There are many examples of discussions (which in themselves slowly turn into traditions) where philosophers do not agree, yet they do not have very differing positions. The source of confusion lies in semantics. A good example showcasing this problem is Leslie Green's fallibility thesis (2008) which was suggested as a more appropriate substitute for the separation thesis and a long debate surrounding it. By

exposing H.L.A. Hart's understanding of natural law theory and his understanding of the separation thesis, Green showed that what Hart really meant was not poles apart from the understanding of those philosophers who are favourable to natural law theory's thesis about connections, rather than separations, between law and morality.

The unfortunate clash between legal positivists and natural lawyers is saturated with misunderstandings and an important reason for this is that central to this clash is the extremely vague separation thesis. The separation thesis is often referred to as the idea that "law and morals are separated". It frequently remains used in this vague and ambiguous form because of its practicality: it is short and easy to communicate. However, this comes at a price. The statement is very vague and ambiguous because the concepts it consists of are general and its message can be understood in multiple ways. First and foremost, it is very unclear what "separation" means here. A similar issue concerns the word "connected" which is frequently used to counter the separation thesis, as in "law and morals are connected" (which is a position often ascribed to natural lawyers). What do "separation" and "connection" actually mean? In what ways are they to be understood? There are many ways and levels on which law and morals can be separated and connected.

As a result of using words such as "separation" or "connection" without making them more precise, such statements can have many divergent readings. The space for interpretation, provided by the unprecise concepts, is exploited by the differing approaches and expectations of the reader. One could understand the separation thesis as a thesis which *descriptively* states that law *is not* moral, i.e. it does not always adhere to accepted moral standards. This is a pragmatic understanding which, in fact, resembles Green's fallibility thesis. It is pragmatic, because it recognizes the fact that law often is not moral; it approaches the thesis from a practical point of view as *describes* what the case in practice is, in "real life". Such reading is manifested by a person whose approach is to expect the statement to convey a fact about what actually is the case. However, another person can understand the separation thesis as an idea that law *does not have to* adhere to accepted moral standards. The understanding that law does not have to be in one way, or another is similar to saying how law *should* or *should not* be. Thus, it has a normative, forward-looking character. It is characteristic of a person who expects that the thesis is offering a rule or a norm, not stating a fact about what is the case in reality.

Thus, there are at least two varying, ways of understanding both "separation" and "connection". In practice, law fails to be moral, and so law and morals can be seen as separated in a way,

even though they cannot be seen as separated in the sense that law should be moral. Similarly, if connection is understood *literally* as "evil law is not law" (another position ascribed to natural lawyers), then it is not true that law and morals are connected since there are plenty of examples of evil laws which are legally binding; if law and morals are understood as connected in the way that law should be moral, then one cannot deny that they are connected in this way.

There are many factors other than expectations that can define the reader's understanding of a statement. Among others, these can be a person's professional background or knowledge and level of experience in the given field. For example, those who are well-aware of the discussion surrounding the separation thesis would be unlikely to fall into the trap of understanding the ambiguous statement in one *or* the other way. However, to complicate matters even more, one has to point out that "separation" is not the only confusing word in the thesis. While one could understand that "law" refers to positive law, the concept of "morals" is also in a dire need of clarifications. If "morals" mean "morality", is it to be understood as a *making* of moral norms? Or is it understood as already existent accepted moral standards? Is such code of conduct understood as ideal code of conduct or as fallible code of conduct? Understanding of the separation thesis differs with a different emphasis on the word "morals". The understanding of law as separated from the exercise of *making* of moral theories is different from the understanding of law as separated from present, accepted moral norms. Moreover, law as separated from an ideal code of conduct is also a different statement than law separated from fallible moral norms.

In short, all this shows that the use of concepts that are as common and frequently used as "separation", "connection" and "morals", and yet are central to some philosophical discussions, is challenging due to their vagueness and ambiguity. Such semantical problems also result from complexity of certain concepts or perpetuation of assumptions. For this very reason, it is essential to expose the understanding and problems of central concepts relevant to the analysing and understanding the relation of biological facts and values.

However, one should note a difference in the approach to analysing these concepts for the purposes of this work. This work aims at developing (or elaborating on) an approach to understanding the relation of biological facts, values and norms in the context of reference of morality to nature. In order to elaborate on the relation, one does not start with analysing what this relation *can be* in different understandings. We are interested in what this particular relation is and on what levels can it be understood in this very specific case of biological facts and

values. Thus, the analysis should *lead* to a specific and narrow understanding of this type of relation and it is irrelevant what other types of relations are present in other cases. In other words, the concept of "relation" is a dependent variable and concepts of facts, values and norms, which can be understood as independent variables, as they define it. Thus, in order to understand what the relation is, there needs to be a satisfactorily clear understanding of what facts, values (and norms) are. For this purpose, before setting out to propose the approach in chapter 3, some preliminary and fundamental considerations about involved concepts will be laid out. Even subtle differences can be beneficially exploited in a more precise analysis of the relation of biological facts, values and norms, for which they are relevant. In the context of understanding values as subjective and objective, it is particularly important to reveal and discuss involved and deeply rooted dualistic assumptions.

In defining the central concepts, it is impossible to account for all possible interpretations. Assumptions have to be made about how they are to be understood and this is especially relevant for discussions of value. It is simply impossible to accommodate all definitions and conceptions of so extensively discussed concepts. However, the advantage of outlining *one* way of understanding them as well as consistently pursuing this definition throughout this work is methodological transparency and clarity about how a certain result has been achieved.

2.1 Morality, values and norms

The concepts of values and norms are central to this work. In philosophy, they are often understood in moral contexts. Morality is a concept that serves guiding good action and moral theories offer approaches to defining good action. Morality and moral theories involve values and norms and the issues at stake here are highly relevant to moral theories. Values and norms can be of moral character; however, they are not necessarily moral. Yet, more often than not, they are analysed in contexts that explore good action. Even though the present work does not concern ethical questions, such as what is moral, but has a more meta-ethical character, in the sense that it explores fundamental characteristics about concepts employed in morality, its utility for moral purposes is relevant in the background. This warrants a brief reflection on how the concept of morality can be understood. For example, the Cambridge Dictionary online states that morality is "a set of personal or social standard for good or bad behaviour and character; or the quality of being right, honest, or acceptable"[4]. Lexico[5], affiliated with Oxford

[4] https://dictionary.cambridge.org/dictionary/english/morality
[5] https://www.lexico.com/en

University Press, suggests that morality consists of "principles concerning the distinction between right and wrong or good and bad behaviour"[6]. Merriam-Webster has three suggestions: morality as "a) a moral discourse, statement, or lesson, b) a literary or other imaginative work teaching a moral lesson", morality as "a) a doctrine or system of moral conduct, b) moralities plural: particular moral principles or rules of conduct" and finally, morality as "conformity to ideals of right human conduct"[7].

These definitions have in common the fact that both take morality as a code of rig*ht/good* conduct, i.e. a set of moral rules. They do not state what this conduct is, therefore, we do not really know what "right" and "good" actually mean; morality simply is the content of right/good conduct, whatever it is. These two characterizations of morality can be used interchangeably; however, in this work we shall adapt a third characterization: morality as a set of *moral norms*. "Code of conduct" and "rules" can be substituted by a more relevant term "norms". This more precisely reflects the core and the nature of moral principles, rules or laws. Moral norms have a normative character which reflects why they can be formulated as prescriptions, i.e. laws, principles or rules. Moreover, moral norms necessarily involve values and reference to norms highlights the importance of values to norms. This is why the concepts of norm and value are so closely related. Referring to morality as a set of moral norms allows to reduce the number of terms used to characterise morality but also to harmonize it with the investigated concepts.

What some of these definitions suggest, is that morality can be *subjective*, i.e. depending on subjective perspective – see Cambridge Dictionary's definition of morality as "a set of *personal or social* standards for good or bad behaviour or character" (emphasis added). Other definitions suggest that morality can be objectively true, i.e. with a specific standard that is independent of subjective perceptions, given that they refer to the fact that there is a right or wrong, good or bad, and even that there is an "ideal of right human conduct" (Merriam-Webster). This suggests that there are at least these two ways of understanding the nature of moral norms: subjectively, based on individual perception, or objectively, i.e. universally true. This is indeed a very central differentiation that will be accompanying the topic of this work. Depending on whether the nature of moral norms is seen as subjective or objective – at least as the definitions suggest, more precise elaboration of these concepts will follow – morality can be understood

[6] https://www.lexico.com/en/definition/morality
[7] https://www.merriam-webster.com/dictionary/morality

as good or right set of moral norms valid for all relevant agents or only for those whose subjective perspective it considers.

2.1.1 Morality and moral issues as descriptive or normative

The brief consideration also exposes another, though related to the above, central question about morality which will be equally relevant to the topic of this work. Is it understood as *accepted but imperfect* or as an *ideal*? For example, someone may have a subjective understanding which from an objective position, or from a point of view of ideal moral norms, is bad. This is a highly important and yet a rarely addressed differentiation. Similarly, as in the case of understanding the concepts of "separation" and "connection", morality could be understood, on the one hand, as *already existent or accepted* set of norms. This understanding contrasts with an understanding where morality is an *ideal to be strived at according to prescriptions and norms*. So, on the other hand, there is the normative exercise of *formulating* norms, according to what is good, rational, and what should be followed. Indeed, an article on Stanford Encyclopaedia of Philosophy on the definition of morality discusses this dual nature of the concept[8]. The article states that "the question of the definition of morality is the question of identifying the *target* of moral theorizing. Identifying this target enables us to see different moral theories as attempting to capture the very same thing. In this way, the distinction between a definition of morality and a moral theory parallels the distinction John Rawls (1971: 9) drew between the general *concept* of justice and various detailed *conceptions* of it" (Gert&Gert, 2020).

The idea that understanding morality depends on the "target of moral theorizing" parallels the above observation that understanding the separation thesis depends on one's approach and expectations. This distinction in understanding was applicable to the separation thesis, as it is to the concept of morality in general (perhaps because the separation thesis is a moral or a morally-relevant thesis, or a thesis concerning a moral theory). The "target of moral theorizing", or approach and expectations, made a very important difference to understanding of the separation thesis; and so does the article claim that the very same issue applies to morality in general: "which of these two senses of "morality" a theorist is using plays crucial, although sometimes unacknowledged, role in the development of an ethical theory" (Gert&Gert, 2020).

[88] https://plato.stanford.edu/entries/morality-definition/

In line with the above discussion of the separation thesis, the Stanford Encyclopedia of Philosophy article calls the two ways of approaching morality as "descriptive" and "normative": "more particularly, the term "morality" can be used either 1.descriptively to refer to certain codes of conduct put forward by a society or a group (such as a religion), or accepted by an individual for her own behavior, or 2.normatively to refer to a code of conduct that, given specified conditions, would be put forward by all rational persons" (Gert&Gert, 2020).

It is interesting to observe that these two ways of understanding morality and moral issues or questions such as the separation thesis, the descriptive and the normative, refer to a set of norms either *as it is* or *as it should be*. The descriptive approach does not imply or address how it should be nor does it suggest that the set of moral norms is an ideal or at least a good one. This means that understanding a set of norms *as it is*, one is *describing*, and such an account corresponds to *facts*. In contrast, referring to moral norms as they *should be*, one gives reasons for it, thus making it a *normative* exercise which is not necessarily linked with referring to how morality currently is. Morality in the descriptive sense describes a present set of norms, it simply states how it is without making any normative claims. For example, in case of a descriptive reading of the separation thesis, stating that law and morals are separated, i.e. that law often fails to be moral, simply describes what is but does not entail any direct normative implications. It does not even necessarily and automatically imply that law should be moral, unless such assumption is implicit. It is a simple statement of *facts*. Similarly, when stating what should be, there is no necessary and inevitable link to a description what currently is the case. Reading the separation thesis in the normative way means that law does not have to be moral (i.e. law can be immoral) in the normative sense; however, such an (absurd) norm does not directly or explicitly refer to or inform whether currently law is or is not evil.

This can be demonstrated on another example; for instance, the question whether animals have intrinsic value, assuming that, according to the anthropocentric approaches, animals are (or were) considered instrumental to humans. With a descriptive approach to morality, someone can state that it is or it has been moral to believe that humans have priority over animals. This has been a historical trend. Some scientists can even inquire whether there is any biological or psychological predisposition, and/or a cultural influence, leading to the fact that humans feel themselves superior to other animals. These are all descriptive statements of facts. At the same time, we can *reason* and revise the understanding of this moral problem and respective norms and values by reasoning and normative exercises. We can challenge accepted moral norms, for example, by acknowledging the fact that many animals feel pain. While the normative approach

to morality works with what *is*, it is not bound by such factual understanding it but can challenge it for normative purposes. This is related to the fact that what is, is not necessarily what should be.

This distinction is helpful in approaching the understanding of how biological facts are referred to in moral context and it is relevant to the differentiation between ontological and epistemological dimension of the problem. As such, it is also important in understanding how philosophers, such as Michael Ruse ((1984) or (2017)), address biological facts about morality. In speaking about the relevance of biological facts to morality, Ruse is *not* concerned with *provision* (formulation) of moral rules, i.e. he does not assume a normative approach to morality. Instead, he is concerned with describing the biological background, or aspect, of our assumed moral conceptions. This is argued to be possible because of the fact that certain moral conceptions are biologically predisposed. And it is relevant to the ontological-epistemological distinction insofar as the very fact that such biological facts are somehow (to be explored further exactly how) are related to moral norms refers to the ontological relation. In other words, when talking about the relevance of biological facts to morality, Ruse discusses morality in the descriptive manner, *as it is*. For example, he states, descriptively, that we *consider* incest unmoral. He explains how incest *is* a biological predisposition (1984), which is another descriptive statement of the biological aspect of this moral conception. The statements he makes are of descriptive nature: first, he *recognizes* that we perceive the norm that incest is wrong as a moral norm; then, he argues that it *is* biologically predisposed explaining it in terms of biological facts. This does not involve any normative judgement as to whether incest should be considered wrong, even when describing this norm as a content of morality.

In fact, this simple differentiation between the descriptive and normative approach can be applied to much of Ruse's work. Generally, at no point in discussions of the biological background of morality, discussing biological background of some moral norms by providing evolutionary evidence for it, does the philosopher make any normative statements about what *should* be considered moral. Ruse's discussion of relevance of biology to morality has a purely descriptive character and is separable from normative exercises of morality where we rationally and autonomously reason about what *should* be accepted as a norm.

The fact that Ruse can limit his discussion to the descriptive aspect of morality is an important observation for those who are concerned about (unjustified) derivations of norms from facts – because Ruse does not, in his work, formulate or justify any moral norms. At the same time, the example of Ruse's positions will help analyse how biological facts are relevant to morality. Some moral norms are biologically predisposed, and in valuing we refer to biological facts –

this is a manifestation of the ontological relation (to be explored further). However, the presence of such ontological relation, manifested in the descriptive understanding of morality, does not have any necessary consequence on the *normative* exercise of *producing* moral norms, i.e. on the exercise of the normative approach to morality. Epistemologically, i.e. with regards to *how* norms are formulated, agents are free to formulate norms. In short, the descriptive approach reflects the ontological relation (although, as well as discussed in chapter 4, particularly in 4.6, there is also a normative aspect of the ontological relation), while the normative approach corresponds to the epistemological characteristic of formulating norms.

In the context of the epistemological understanding of the fact-value relation, the observation that biological facts about morality do not affect the exercise of normative morality, i.e. that epistemologically we are autonomous in formulating norms, is indeed crucial. The purpose of morality is to help us act well by means of reasoning and challenging present moral conceptions, reflecting and revising our moral norms whenever it is necessary. Indeed, it is the very task of moral philosophy. Therefore, the human value of morality to humankind is in the normative aspect of morality which helps us exercise our mental powers, reason, in order to improve morally and act better. Hart certainly had important reasons for emphasising this point, as discussed in the introduction.

Perhaps it should be noted, in order not to misunderstand this methodological differentiation that the possibility of the descriptive and normative approaches to morality does not mean that there are two different moralities. We can look at the very same norm using both approaches, as was just done discussing Ruse's example of incest in the example of animals. The article in the Stanford Encyclopedia of Philosophy suggested that, depending on which approach is selected, there are profound consequences on moral theorizing, especially when the differences in the approach are not accounted for or recognized. The discussion of the confusion and misunderstanding around the separation thesis confirms this claim. Indeed, this observation that morality can be approached in a dual way is very significant in the context of this work. In later chapters, this will be evident in differentiating between the ontological and epistemological understanding of the fact-value relation.

2.1.2 The relationship of norms, values and purpose

It was stated that morality is a set of norms about what is good or right to do; such norms can also be formulated prescriptively, providing guidance about what should be done. Most generally, norms can be understood as principles and this is evident in definitions of a norm. Referring again to dictionaries indicates that a "norm" is "a principle of right action binding

upon the members of a group and serving to guide, control, or regulate proper and acceptable behaviour" or "a pattern or trait taken to be typical in the behaviour of a social group; a widespread or usual practice, procedure, or custom"[9]. The first definition of a norm clearly has a normative character while the following is descriptive. From this, one can clearly see that norms involve a fundamental element which defines what is good or right and as such sets a certain direction of action. This element that defines or sets the direction is a value. Undoubtedly, this is a necessary, fundamental element of a norm.

Values are at the core of norms and norms can be reduced to values. This means that each norm contains a value and a norm does not exist without a value because value is what defines the good which the norm communicates. In a way, value is a simpler, i.e. more basic, component than a norm. A value simply captures and reflects what is defined as the *good*. A norm can go further than this by informing about further circumstances around the good, such as linking it with other things or actions. A statement of a value can exists without a norm even if a statement of a norm cannot exist without implicit or explicit assumption of a value. Although, it should be noted, sometimes expressions of value are difficult to distinguish from formulation of norms, when norms are formulated to generally reflect what is good. This is the case in the following example: "health is good". This is an expression of a value that may also be understood as a norm. In contrast, "health is good and should be pursued through a healthy lifestyle" is a norm that has at its core the value of life but frames the pursuit of this value in a further context (that of promoting a healthy lifestyle in order to achieve the value).

Since it is values that define the good, in order to focus on the content of norms, it is necessary to scrutinize values behind them. Moreover, a move from a value, an understanding of the good, to a norm, a formulation of the further context about setting or pursuing this value, may involve *reasoning*. While this brief consideration shows the difference between value and a norm, it also shows how closely related they are. Indeed, in certain contexts, collapsing the two types of concepts is negligible; in others, however, it may be a useful differentiation to consider.

So far, the above could be said for all kinds of norms, moral and non-moral ones. What distinguishes moral norms from others, thus, is the nature of values involved. Values have a normative power, i.e. can be used as basis for formulation of norms, but not all values and norms are of moral, rational or objective character. If values and norms are justified by a rational and a moral consideration, they may be of a moral character. The moral character of a reasoning is characterised by considering the good of all agents rather than exclusively

[9] https://www.merriam-webster.com/dictionary/norm

individual good which may or may not be good from the perspective of others. As will be further outlined, this has to do with the differentiation between subjective and objective values. This understanding of values will be addressed in more depth in the following sections. However, what is important to note here, is the fact that valuing and normativity is to a varying extent accompanied by reasoning, or more precisely, by moral reasoning.

Moreover, it is interesting to note that reasoning about moral norms involves assumptions about a fundamental standard, which is nothing else than a value, against which the rationality, or moral appropriateness, of another value and the respective norm is judged. Such fundamental assumptions are necessary, inevitable but their presence and necessity is often overseen. For instance, in the example "health is good", one can enquire about this value by asking further "*why* is health good". Probably, the answer would be something like "health is good because it keeps us fit" and/or "health is good because it allows us to pursue our goals". All in all, this leads to the fact that health is good because it keeps us alive to pursue our goals, or simply, because it keeps us alive. Thus, the fundamental value against which we evaluate could be that of life.

Another relevant observation about differentiating them is that the concept of a norm highlights the action of formulating guidelines for action (prescriptive norms) more than the concept of value does. This is why it is norm referred to in the "is-ought" problem, although the is-ought problem is also often formulated in terms of values (e.g. see Searle (1964) or Finnis (1980) as shall be explored further in chapter 3).

The fact that a value is at the core of a norm and of a purposeful action is true from any way we approach morality. If we look at morality descriptively, one can infer what values have motivated certain moral norms (or rules, principles). In other words, one can understand what the value motivating the moral conception was by inquiring about the fundamental value, which defines what is understood as right or good. Assumptions about values and morality can be looked at and described in this backward-looking, historical way. Values and morality can also be understood descriptively when we simply follow assumed values or conceptions (such as cultural values), or values based on desires and inclinations. However, values are the core of norms also in the normative manner. We can reason in a moral manner either about the value or the norm, or both simultaneously, by providing arguments for accepting them. Sometimes we also assume norms without a clear understanding of values behind them, where values are hidden or implicit. This account will, of course, be elaborated on in the upcoming sections. So far, the attempt is to outline general and rather uncontroversial observations about the relations of values and norms.

Finally, the relevance of the concept of purpose to norms and values should be highlighted. Values state what is valued or valuable and, as such, they are the basis of formulating norms but also can set the course of action to pursue them. Thus, values set a purpose to actions and decisions which is often reflected in norms. According to Woodfield, purpose is about "whether a thing has a purpose or is acting for the sake of a purpose, and, if so, what that purpose is" (1976, S. 1). Purpose is roughly the *reason* why a thing or an individual is acting as it is acting. Purpose goes a step further yet than a norm because it characterises action which bases on a value and a norm. We can answer the questions such as "what is the purpose of acting like this?" or "why are you acting like this?" by reference to both norms and value.

Thus, there are two elements of a purposeful action: first, setting of value (it is suggested to call it "goal-setting", where goal is understood as value) and then pursuing it ("goal-pursuit"). The reasoning involved in these two components has a different character as there are different types of reasoning depending on the subject and the goal of the reasoning. An agent can reason about whether or not a value should be pursued and how it should be pursued in a moral manner. However, an agent can also identify a value based on an arbitrary or even unmoral desire and even in such case reasoning is involved when an agent is reasoning about ways of pursuing even most irrational desires. This concerns a differentiation between subjective and objective valuing.

As for the differentiation between values and norms, it has been highlighted here due to the fact that it ca be beneficial, as will be highlighted in chapter 3. This is where the models of reasoning involving facts and values leading to norms are investigated. More specifically, distinguishing values and norms highlights the *move* between value and norm as well as respective purposeful action directed at them. What is important is that such moves always involve different kinds of reasoning, such as about goal-setting and goal-pursuit. We reason from embracing something as valued or valuable to norm and respective action, even if such values, norms and purposes are not of moral character.

2.2 Values

Values define what is good or right, which is why they are often referred to as *goods*. Values have a value *for an agent*, but important in consideration of values is also the question of their rationality. This dual aspect of values can be reflected in referring to what is *valued*, such as valued by an agent based on her or his subjective state, and what is *valuable*, such as what is rational to value based on rational and objective considerations (following Finnis' idea on differentiating "desired" and "desirable" (1980) – see further in 2.2.3.2). The concept of a value

is an extremely complex topic. Thus, it must be emphasised that only certain limited aspects of the concept of value, relevant to understanding their relation to facts, are investigated. The focus will be on these selected most relevant issues and selected authors.

Value is an abstract, theoretical concept and it cannot be proved or disproved empirically. Nobody can provide a sharp, empirical evidence of what values are, like one can, for instance, provide empirical evidence for existence and the nature of other extremely challenging phenomena, such as the dark matter. Of course, there can also be contending scientific theories about the dark matter; however, in case of such theories we can expect that we may once (in many years) have a hard *proof* about what the correct theory is. In case of values, all we can do is to provide more or less sound interpretations and arguments for such interpretations. What about empirical evidence to help us understand this concept? The very idea of this makes philosophers uncomfortable. Understanding values is challenging; firstly, because it is a complex philosophical topic and, secondly, because it is challenging to understand its relation to facts.

As Rolston notes, we cannot assign any organ responsible for perceiving or sensing values, like we have organs for knowing other needs (1982). However, as will be shown in chapter 4 (particularly in 4.2), empirical evidence shows that the content of values has a much stronger biological background than it is thought (indeed, Wilson, actually does suggest that there is an organ, a part of brain, in which valuing originates (2004), although his understanding of values is too controversial to consider as it does not make a good resource for this work). At the same time, even granting this biological background of the content of values, one cannot deny that the content of values is within the autonomous decision-making of an agent. Note the differentiation between the understanding of the *concept* of a value, i.e. as a type of statement with certain logical characteristics, is intertwined with the understanding of the *content* of value.

Understanding values as subjective and objective is the most relevant to this work, as will be discussed further, due to interrelated fact-value and subject-object dualisms. Indeed, the understanding of the values' relation to facts to a large extent influences this aspect of understanding of value, and vice versa. Thus, exposing certain problems and dependencies with regards to dualistic understanding of values, shall facilitate discussing the approach to the fact-value relation. Similarly, the understanding of values as subjective and/or objective depends on interpretation of their relation to facts. The following subsections in this chapter outline related dualisms, deal with the subjective understanding of values, and other problems, followed by the analysis of the objective understanding of values and related issues. At the end

of this chapter, a clearer understanding of the issues pertaining to the subjective and objective values, and the related dualisms, should facilitate a fresh start in the attempt to understand and capture the fact-value relation.

2.2.1 The subject-object and the fact-value dualism

J. Baird Callicott (2012) argues that central to the understanding of values as subjective and objective is the concept of dualism which has influenced philosophers since Descartes. Indeed, traces of thinking in terms of an *absolute break* between concepts, characterised by a "black-or-white" perception of concepts, are visible in works of many philosophers. The concept of dualism is associated with Descartes and his fundamental distinction between mind and body as well as further related sets of dualisms. As with many concepts which are repeated over a long period of time, Descartes legacy has become interpreted in different ways by different philosophers and philosophical schools. For this reason, this work will focus on understanding presented by the authors, who have already been quoted here (most importantly Callicott (2012) and Putnam (2002)).

Dualism is a very relevant concept to this work because it has influenced the perception of the fact-value relation. First of all, it should be noted that it is notoriously unclear what precisely characterises a dualistic relation. Even Putnam who is concerned with defeating the idea of fact-value dualism, or as he refers to, "dichotomy"[10], offers only clues concerning the understanding of the concept. First of all, the philosopher makes clear that dualism is not a distinction. Although he does not elaborate on this further, dualism seems to be a radical interpretation of a distinction, or a difference, between two concepts. Putnam states that a dichotomy "was conceived as an "omnipresent and all-important gulf"" meaning that "to say that it was "omnipresent" is to say that this distinction was conceived of as something that could be applied to absolutely every meaningful judgment in absolutely every area" (2002, S. 11). Putnam understands dichotomy, or dualism, as an omnipresent distinction in "absolutely every area". In the context of attempting to understand what dualism implies, this "omnipresent gulf" can be taken to suggest that there can be no case in which two dualistically separated concepts are connected. Dualism seems to mean that under no circumstances and in no possible understanding can two concepts be connected, or related, because they are radically distinct. Based on Putnam's differentiation between dualism and a distinction or a difference, the latter would grant that two concepts can be distinct in one way but connected in another. This is not possible in dualism where concepts are distinct, i.e. not connected, in "absolutely every area".

[10] We shall assume that «dichotomy» and «dualism» are the same.

Certainly, such an understanding of dualism involves some issues. For example, it is evident that the idea of two concepts being *distinct* (as opposed to being the same, or similar) is equated with concepts being separated (as opposed to being connected). However, it seems unclear why these two issues became necessarily associated. Even if concepts are fundamentally distinct, is it appropriate to state there is absolutely no means to connect them? At the first impression, the less radical idea of distinction seems much more plausible as it is more flexible and allows combinations. Arguably, things can be different but separated and connected in various ways. This reveals an inherent ambiguousness of dualistic conceptions about why an "omnipresent and all-important gulf" would imply that being distinct precludes being connected. It seems to be precisely the peculiarity of the concept of dualism that it suggests this radical distinction and separation of things. Possibly, there are other ways of understanding dualism; however, for purposes of this work, the radical understanding that equates "difference" with "separation", as proposed by quoted authors, is assumed.

As for the application of this idea of dualism to specific concepts, one should note that there is not one set of dualistic concepts but a chain of interlinked ones. Many authors link the concept of dualism with the idea of a fundamental break between mind and body; the idea that mind and mental states are radically different in nature from body and physical states. It is a thought which dates back to Plato (Robinson, 2017) and one that has been strongly anchored in philosophical thought since Descartes. Val Plumwood (1993) provides the following account of the dualism: "In Descartes' account the gulf between mind and body becomes even greater as bridging characteristic involving both body and mind, such as sensation and perception, are allocated to one or the other side as part of the polarization process. In dualistic construals of the mind/body division, mind and body are assumed to belong to quite different orders, being seen as so different as to the classic problems as to how they can interact. The sphere of mind, of rationality and intellect, is similarly assumed to be quite different from the sphere of physicality. Thus it is widely assumed to be the possession of mental attributes which makes humans completely different from other animals" (1993, S. 70).

The radical dualistic interpretation of mind-body relation makes the ambiguous suggestion that mental states are radically different from physical states. Both are necessarily, radically separated from each other to the extent that there are no similarities between them and they cannot be connected. Many authors point out that this very basis of the chain of dualisms is simply erroneous. For instance, Putnam states: "The ability to refer to things is not something that is guaranteed by the very nature of the mind, as Descartes mistakenly supposed; reference to things requires information-carrying interaction with those things, and that is enough to rule

out the possibility that truth is in all cases radically independent of what we can verify. Truth cannot be so radically non-epistemic" (2002, S. 108).

Indeed, the suggestion that mind and body are separated, especially if implying that mind and body cannot be connected, seems very odd and farfetched. While mind and body, mental and physical states, are certainly different, it seems very implausible to suggest that neither depends on the other and neither can be connected with the other. As Putnam (2002) suggests, the mind requires the body to be able to process, or refer to, things. The body delivers information to the mind. The mind influences and operates the body. This very simple argument against the dualism is heavily supported by empirical evidence. Indeed, (nowadays) the idea of an absolute break between body and mind can be falsified empirically as it has become an object of empirical study. Mounting evidence suggest that, even though there is still a lot we do not understand about the mind, there is no reason to doubt that mind and mental states are biological (Ruse, 2017). In fact, such evidence is understood as demonstration of an ontological relation between biological facts and values and will be further discussed in chapter 4 (particularly in 4.2 while the relation of this evidence to the problem of mind-body dualism is discussed in 4.3.2).

It is frequently pointed out that the idea of mind-body dualism fitted very well into the scientific revolution where advance in science translated into enthusiasm in "taking control" over nature through science. Particularly ecofeminists argue that dualism facilitates perceiving everything connected to the body, i.e. also nature, mechanistically and under the controlled of the independent human mind. Freya Mathews (1991) states that "mind is the theatre of reason and telos, the screen or sensorium on which colors, scents, sounds tastes have their ghostly being" (1991, S. 8) where body is a mere transport machine for the realization of the mind.

Nevertheless, putting these context interpretations aside, it is important to explain why and how the idea of mind-body dualism is important to the topic of this work. The dualism separates mind and body, where the mind is understood as an attribute of the subject. Given its mind, the subject is capable of valuing and exercising rationality. As such, the mind, subject and value as a cluster are linked together and radically contrast with the opposite pole: things external to the mind of the subject which are classified as objects, such the *mindless* body and nature. The mindless body is associated with nature, more precisely biological characteristics that against empirical evidence exclude mind-related elements, and is understood in terms of facts and objects. No object is capable of producing values or of reasoning. Only the mind of the subject, understood as radically disconnected from the body, have the power to reason and value which is why "the individual self is essentially the mind; the body is contingent to selfhood, and hence

to our identity" (Mathews, 1991, S. 20). The mind operates the body, objects and nature. As such, following the understanding of the difference as a radical separation of mind and body, the idea of subject-object and fact-value dualisms seems to follow. The subject and value are placed in the "mind" basket, while object and fact belong into the "body" or "nature" basket.

This should explain why the fact-value dualism follows the subject-object and the mind-body dualism. If subject and object are necessarily separate because mind is separate from objects outside of it, so are values, which originate in subject, separate from facts which correspond to objects such as those in nature, biology. Due to this interrelation, as was mentioned above, empirical evidence that suggests biological origins of the mind and that explains value predispositions which will be discussed in chapter 4 (4.2), is understood as a one type of argument, or manifestation, of the ontological relation of facts (referring to our biology) and values.

Moreover, this interpretation also provides a background to the dualistic Cartesian understanding of values, as presented by Callicott (2012). It is the subject that confers values (via its mind). While the subject is radically distinct from the object, nothing that comes from to the external-to-subject objects, such as facts about its body, can produce a value. Callicott states that "The famous distinction of Hume between fact and value and Hume's development of a subjectivist axiology may be historically interpreted as an application or extension to ethics of Descartes' more general metaphysical and epistemic distinction [between subject and object]. (…) Axiological subjectivism, indeed, may be clearly formulated only if the objective and subjective realms (...) are clearly distinguished" (Callicott (1985) in Cheney, 1992, S. 228). Thus, an equally radical interpretation of Hume's distinction between fact and value (which will be discussed in more detail in chapter 3, 3.2), seems to fit into the radical interpretation of the relation between subject and object, mind and body: "the fact/value distinction of classical scientific naturalism, which relegates values to subjectivity, and thus, excises them from the objective world, is based on a suspect distinction between subject and object" (Cheney, 1992, S. 228).

Reference to Hume's "distinction between fact and value" makes one ask how this understanding of the fact-value dualism stands in relation to the is-ought problem. It should be clear that the is-ought problem, which refers to a fallacy of deriving a norm from a fact, is linked to the fact-value dualism by virtue of value's relation to norms. If values have normative power, and values are radically different from facts and cannot be linked with them, then norms cannot under any circumstances and in no cases be linked to facts (including via derivation). The dualistic understanding of fact and value fuels an equally radical understanding of the is-

ought problem. Perhaps it is also the other way around: a radical interpretation of the is-ought problem fuels a fact-value dualism. For this reason, addressing the is-ought problem and understanding in what relationship norms stand to facts and values, and what really is the problem behind the is-ought thesis, is the first step to reinterpreting the fact-value relation. This issue will be discussed in more depth in chapter 3.

This discussion shows how all three kinds of dualism are closely related. This suggests not only that addressing one simultaneously means addressing another; it also means that rejecting one of them carries the consequence of possibly rejecting another. As Cheney notes, "once we reject the classical subject/object distinction, Callicott argued, we must also reject the sharp fact/value distinction parasitic on it." (1992, S. 228)[11]. All three dualisms are relevant to understanding how the fact-value relation became perceived and, possibly, what are the problems related to the dualistic interpretation of the fact-value relation. There is an entangled relationship between the subject-object and fact-value dualisms. As a result, the subject-object issue is very relevant to understanding of values *in terms of their relation to facts*. The subject-object dualism, and the resulting understanding of fact's relation to values, is also evident in the subjective and objective interpretations of values. This is the reason why they are being confronted early in this work.

As the interrelation between subject-object and fact-value relations entails that if one is understood dualistically, the other is understood dualistically, it also means that if one is reinterpreted, the other should be reinterpreted as well. In order to close this loop, after elaborating the approach to understanding the fact-value relation, chapter 6 will return to discuss a resulting reinterpretation of values as subjective and objective.

2.2.2 Subjective values: Hume and Cartesian dualism

So far, in the short introduction above, it was possible to establish a basic and rather uncontroversial feature of values: they denote a *good* that is valued and/or valuable to pursue. What follows, is another uncontroversial point: the fact that values are dependent on the valuer, an agent who embraces them. Value is a value for someone who can appreciate it and embrace it. Indeed, without much controversy, it can be assumed that this valuer-dependency, and the fact that values *are embraced* by a valuer is a fundamental characteristic of a value[12]. This view can be interpreted in various ways. Particularly its dualistic interpretation, to be discussed

[11] Cheney`s use of the word «distinction» should be understood as «dualism».

[12] This statement is uncontroversial so long as it leaves open other characteristics, such as concerning how the value is formulated, e.g. whether the value that is embraced is formulated in a subjective manner, or is adopted or assumed by the agent as valuable based on *reasons* for its value.

below, is more controversial. It is difficult to dispute that a basic feature of the concept of a value is that it is meaningful for someone and is embraced by someone. While it is not largely contested, the alternative views are generally associated with the view of values as objective[13]. The concept of objective values is an equally relevant element in the discussions that will follow in 2.2.3.

David Hume (2011) is frequently understood as a major advocate of this subjective view of valuing. According to the Humean position, values are conferred by the subject based on their *subjective states*. The "subjective state" is to be understood as individual attitudes innate to the agent, that lead to an urge for a certain thing, desires or "sentiments", as Hume calls them (Callicott, 2008). Callicott states: "According to Hume all behaviour is motivated by passion, emotion, feeling or sentiment. For purposes of moral theory, the passions may be divided into two classes, the self-oriented (e.g., fear, jealousy, animal appetites, etc.) and the other-oriented (e.g., love, sympathy, charity, etc.). The other-oriented passions are not derivative of the self-oriented ones" (1984, S. 304) and so, "Value, according to Hume, is subjective and affective" (Callicott, 1984, S. 305). It is precisely the subjective sentiments, desires or attitudes of the very agent that are said to produce values.

The roots of this subjective view of valuing can be traced further. It has been argued by Callicott (1984) that this characterisation has been influenced by Cartesian *dualism* between subject and object. The Cartesian view specifies the valuer as an intentional agent whose "subjective state" produces value: "from the point of view of Modern philosophy, value is conferred on or ascribed to an "object" by an intentional act of a subject. In the Modern worldview, value is a verb first and a noun only derivatively. Among other things they do, subjects think, perceive, desire, and value. The intentions, the targets of a subject's valuing are valuable, just as the intentions of a subject's desiring are desirable. If there were no desiring subjects, nothing would be desirable. If there were no valuing subjects, nothing would be valuable" (Callicott, 2005, S. 352). The dualistic view implies that values can be *either* subjective *or* objective. Callicott further argues that in the Cartesian view, values are perceived as *exclusively* subjective and not objective.

Similarly, in her characterisation of the subjective Humean view, Foot (2001) understands the subjective and dualistic features of values as connected: "meaning was thus to be explained in

[13] This is particularly the case in environmental ethics were arguments often aim to argue that there is value in nature independently of humans. However, these issues cannot be addressed here as they would expand even further the scope of this work.

terms of a speaker's attitude, intentions, or state of mind. And this opened up a gap between moral judgements and assertions, with the idea that truth conditions give, and may exhaust, the meaning of the latter but not the former. Thus it seemed that fact, complementary to assertion, had been distinguished from value, complementary to the expression of feeling, attitude, or commitment to action. Propositions about matters of fact were assertable if their truth conditions were fulfilled, but moral judgements, through conditions of utterance, were essentially linked to an individual speaker's subjective state" (2001, S. 10). The "gap" that Foot refers to is indeed the "dualistic" gap between values and facts, subjective and objective references. According to this view, it is only agent's subjective "attitude, intentions, or state of mind" that lead to values.

It is entirely acceptable to claim that a basic feature of a value is that it is meaningful for an agent because a value has a meaning or is good *for someone*. However, the Cartesian/Humean view is problematic because it implies that this is all that characterises values. In this radical dualistic view, values can only be attributed to the subjective perspective and not to anything outside of that subject (i.e. objects such as facts or reasons that are not originating in the subjective state) (Putnam, 2002). The resulting interpretation would be that values cannot relate to anything *external* to the subjective states, and that values cannot be *prescribed* to the agent. In other words, according to the authors quoted, valuing does not involve references to anything but innate subjective states. In fact, the dualism implies that such objective references are considered contradictory to the subjective view.

Both Callicott (2005), Putnam (2002) as well as other authors (e.g. Godfrey-Smith (2005)) claim that this either-or view of subjective valuing is a consequence of Cartesian subject-object dualism. This either-or dualistic view is clearly ascribed also to Hume, as evident in Foot (2001) but also Putnam (2002) (who ascribes that fact-value dualism to Hume). In fact, the dualistic Cartesian and Humean views are frequently conflated and dualistic understanding of subjective values is attributed to Hume. It is not necessary to engage in deeper discussions in order to disentangle them here. However, it should be useful to keep this vague differentiation in mind: the radical and dualistic Cartesian interpretation, according to which subjective view of values implies that values cannot be objective, will be referred to as dualistic view of values. Hume's view of values should be understood as highlighting the importance of subject's subjective states, attitudes, sentiments, desires, etc. This isolation of Hume's view will come in handy because Hume's view of values, and the role of reason, will be elaborated in chapter 3, 3.2, in the context of the is-ought problem.

Indeed, the fact that values are embraced by a valuer is a basic component of the concept (without specifying who or what is responsible for the formulation of values – only subjective states and/or also things external to the subject such as facts or reasons). This view highlighting the basic feature of value, the idea that they are conferred or embraced by a valuing agent, will be referred to as simply the view of subjective values. In contrast to the dualistic view, it does not involve the dualistic consequence that values cannot be objective, i.e. that in valuing there can be no references to things outside of the subject (more precise meaning of objective values, references to objects and issues related to this view will be elaborated in 2.2.3).

2.2.2.1 Subjective evaluation

In order to elaborate on the phenomenon of subjective valuing, i.e. valuing based on subjective states without a necessary involvement of reason, one may deepen the understanding of subjective "evaluation". The term is frequently used in the context of values, although it is rarely defined by its users. It can be deduced from the writings of various authors that *evaluation* stands for the process of formulation, production or conferring values[14]. It is usually left open whether evaluation is based only on subjective states of the subject or whether it involves reasoning and references to objects (in fact, authors often speak about subjective valuing without understanding it in the radical dualistic manner that suggests that such valuing involves no references to objects/reasons – this is especially the case with Searle (1964) and Fuller (1958), as will be discussed elsewhere in this work (see chapter 3, 3.3.2, and chapter 5, 5.1.1, respectively). The point of this discussion is to elaborate on the concept of subjective valuing (without necessary dualistic implications).

Searle states: "Any justification a speaker can give of one of his evaluative statements essentially involves some appeal to attitudes he holds, to criteria of assessment he has adopted, or to moral principles by which he has chosen to live and judge other people" (1964, S. 53). The content of a value depends on valuers' desires or sentiments *but also* on reasoning which involves "criteria of assessment he has adopted, or to moral principles by which he has chosen to live and judge other people". Values and the process of evaluation can be based on what is *valued* alone according to the Cartesian framework, but also on what is *valuable*, thus involving reasoning.

[14]The terms are considered here as interchangeable. According to the approach above, any such terms that refers to formulation of values as an epistemological process depending on the agent`s exercise. This is distinct from addressing what values are in terms of their content and what ontological connections to facts they manifest in terms of their content.

The derivative adjective "evaluative" is used to refer to anything that entails valuing. For example, Lon Fuller (1958) refers to it in the following way:

"(…) when we are dealing with purposive action projected through time, the structure that we observe, recall, and report lies, not in any instantaneous state of affairs, but in a course of happening, which can be understood only if we participate in a *process of evaluation by which the bad is rejected and the good retained*. If I look over the shoulder of a mathematician working on a problem beyond my comprehension, I cannot predict or control what he will do, nor will I be able to give more than a trivial account of what I have observed. In such a case, as in that of the boy and the clam, the "fact" of the event can be understood only by one sufficiently *capable of evaluation to know what is happening when a good thing is embraced or a bad one rejected*" (1958)[15].

Fuller suggests that we can understand what is happening in the context of his examples if we "participate in a process of evaluation by which the bad is rejected and the good is retained" (Fuller, 1958). The process of evaluation denotes a process of defining what action is good and what action is bad, relative to the value, or a goal that aims to fulfil this value. In the first example, a boy aims to open a clam. Fuller means to show that his goods are defined by *his* purposeful action of opening the clam. It is the boy who, based on his subjective states, defines the good and the purpose. As there is no mention of whether or not this involves reasoning, we continue assuming that subjective states are not necessarily based on rational consideration, but may simply be desires or inclinations, such as curiosity to open a clam. Based on this form of the boy's evaluation, whatever contributes to opening the clam is good and whatever does not contribute to this purpose is bad. Similarly, what the mathematician does is dependent on her or his value and respective goal; whatever contributes to achieving this goal is good. Evaluation *defines* the value of an action. In Fuller's example, evaluation seems to be geared not so much towards the definition, formulation of a value (goal-setting) but rather towards the process of achieving this goal (goal-pursuit). He refers to evaluation in order to underline the subjective manner of defining the goods, values, in each case pursued by an action. In this case, such subjective evaluation does not involve reasoning about the whether the subjective state is rational or not.

Both Searle (1964) and Putnam (2002) refer to evaluation as the term seen as the (dualistic?) *alternative to description*. It refers to the normative exercise associated with the production of norms, also referred to as *oughts*, as well as values which are necessarily present in norms. This

[15] Emphasis added.

is clear from how Searle refers to *evaluation*: “If a reason is given for supposing the obligation is void or that the promiser ought not to keep a promise, then characteristically a situation calling for an evaluation arises. Suppose, for example, we consider a promised act wrong, but we grant that the promiser did undertake an obligation. Ought he to keep the promise? There is no established procedure for objectively deciding such cases in advance, and an evaluation (if that is really the right word) is in order. But unless we have some reason to the contrary, the *ceteris paribus* condition is satisfied, no evaluation is necessary, and the question whether he ought to do it is settled by saying "he promised." It is always an open possibility that we may have to make an evaluation in order to derive "he ought" from "he promised," for we may have to evaluate a counterargument. But an evaluation is not logically necessary in every case, for there may as a matter of fact be no counterarguments.” (1964, S. 47 - 48)

In the above quote, Searle refers to evaluation as a process of a *subjective* definition of values, as opposed to an *objective* definition of values. Searle does not specify what evaluation means. However, assuming the common interpretation of the term, one should understand it as referring to the formulation of values based on subjective states of a subject. If subjective evaluation is understood as opposing objective definition of values, then it follows that subjective definition of value refers only to subjective states of a subject, as opposed to anything external to it, including reasons that refer to external things. As noted previously, such subjective evaluation can result in values, and respective norms, which can be irrational or unmoral from a different point of view (e.g. from the point of view of socially or morally accepted values or from the point of view of another subject. In the examples of Fuller, the values (perhaps better understood as a goal in the context of purpose) justify what the boy or the mathematician ought to do. However, this normativity is subjective and valid only for the valuer, also known as the subject. It is neither necessarily an objective normativity, nor a moral normativity.

Searle’s understanding also reflects that as long as it can be shown that something is in any way *valued* by a subject, the is-ought objection does not seem to arise. Searle states that evaluation takes place whenever there is “no established procedure for objectively deciding” and that “we may have to make an evaluation in order to derive "he ought" from "he promised," for we may have to evaluate a counterargument”. Even though Searle argues that evaluation is not necessary in certain cases of derivation of an ought from an is, it seems that it has been traditionally assumed that it is an act that justifies such derivation in all cases. Also Callicott confirms this subjective requirement for formulation of norms when he states that the mystery

[16] "dissolves, on Hume's own grounds, when the missing premise referring to passion, feeling, or sentiment is explicitly included in the argument" (2008, S. 122).

On the side-line, it should be also pointed out that in Searle's quote, it is difficult to observe a boundary between statement of "evaluation" and norm. Formulation of values based on subjective states as discussed above, is perceived to have normative power to capture the value in relation to other things and actions. When formulated prescriptively, it justifies what *ought to* be done. However, Searle seems to be one of the authors who equates evaluation with normativity. While this is not necessarily incorrect given their close relation, this move blurs the certain difference between them.

The above has outlined how, in philosophical contexts, "evaluation" is understood as a formulation of values. Very frequently, based on rooted assumptions, it refers to the formulation of values based solely on the subjective states of a subject. As visible in Fuller's examples, evaluation and definition of what is "good" or "bad" was made against the fundamental assumptions reflected in subject's subjective states. This is why the result of such evaluation is valid only for the subject. In such cases, subjects *reason* how to pursue their goal but not about what the goal (value) is (because the goal-value is formulated without reference to reason but with reference to subjective states). Thus, their goal may not be rational or moral.

2.2.2.2 Issues concerning the dualistic view of subjective values

Even in this brief and general exposition of values as subjective, questions arise, particularly with regards to the dualistic understanding. In general, the criticism that pertains to a radical dualistic understanding of subjective values (often ascribed also to Hume – although Hume's position will be tackled in more detail in chapter 3, 3.2) concerns the implication that they are arbitrary and potentially unmoral or irrational. In other words, this view does not directly involve the criterion that values should be rational.

There are various ways to address the problems pertaining to the dualistic view. Indeed, it is necessary to address some of them, as certain consequences of dualism (such as arbitrariness of values) are so untenable that no philosopher would likely accept them. For example, Callicott (2012) argues that within the dualistic framework, Kant (2012) has developed a theory that succeeds to avoid many such shortcomings. Based on the argument of the author, however, Kant's theory involves non-dualistic elements. Thus, it cannot really be said to conform to the dualistic Cartesian framework. As this shows, one strategy to deal with inacceptable dualistic

[16] Refers to the mystery «of the passage from "is" to "ought"" (Regan, 1980, S. 363)

interpretations involves reinterpreting dualistic elements non-dualistically. However, in the below considerations, dualistic implications are taken literally as following dualistic thought consistently is the most appropriate manner to show how implausible it is. This is necessary in order to clarify certain conceptions and issues pertaining to the problems closely related to the fact-value relation. The following sections will summarize doubts and issues raised in the discussion of the dualistic view of subjective values, relevant in the light of the values' relation to facts. A brief overview of Kant's distinct position on the subjective understanding of values is offered towards the end as it provides an interesting perspective on the issue.

2.2.2.2.1 Arbitrariness of values and the conflict with universality and rationality of values

It is clear from the discussion above that one important implication of the dualistic subjective view of values is that it entails the possibility that values differ greatly and are very arbitrary and not necessarily rational. If values depend on the subjective states such as passions, desires, sentiments, they can be extremely divergent and incompatible with commonly accepted values. What is more, values can be even unmoral or irrational according to standards that by others are considered objective, universal, moral and/or rational. This is because the source of values are agent's subjective states which are at the agent's discretion.

It is well-known that agents tend to act irrationally and against whatever is considered as objective, universal, moral or rational. In the dualistic subjective view, the subjective states of a subject, such as desires, are seen to lead to normativity. Foot also notes that "to many philosophers each [desire and interest, i.e. subjective states] is apt to seem to have a special, perhaps unique, power to explain human action. That this is the case seems, and always seemed, to me to be merely an illusion rife among philosophers. For after all an action can be explained by all sorts of causes, as for instance (a) habit, (b) a tendency to mimic the actions of others, c) something significant about the occasion on which one first did what one is now going to do, (d) the fact that it is substitutionally representing some other action, or (e) even something as far out as post-hypnotic suggestion" (2001, S. 61). Foot points out that if we grant that action is directed at values which are entirely at the discretion of agent's subjective states, it may be very arbitrary. Such view that does not advocate or accommodate the role of reason clearly threatens promoting moral standards.

For this very reason, Foot (2001) writes "What, asked Quinn, would be so important about practical rationality if it were rational to seek to fulfil any, even a despicable, desire?" (2001, S. 10). More context to this question helps to capture the problem: "In his article 'Rationality and the Human Good', Quinn attacked a view of practical rationality that he called

'neoHumean'[17] and defined as 'one that makes the goal of practical reason the maximal satisfaction of an agent's desires and preferences, suitably corrected for the effects of misinformation, wishful thinking, and the like.' He pointed out that by this account, practical reason, which would concern only the relation of means to ends, would therefore be indifferent to nastiness or even disgracefulness in an agent's purposes" (2001, S. 62).

In this quote, the problem is presented quite plainly. According to this view, perhaps better referred to as dualistic rather than "neoHumean", values can have any content and the question of its rationality or morality is not relevant. If valuing, or evaluation, is dependent only on the subjective states of a subject, we lose obvious arguments against arbitrary values. Godfrey-Smith states that "on this view, to say that X is good or has value is to say 'I like X" or 'I approve of X'. One difficulty with this sort of approach is that although it permits disagreement about what is taken to be good or valuable, it is not clear that there is any room for conflict. If A says that X is good and B denies this, there is no contradiction, but simply an expression of a difference of taste" (2005, S. 321). In other words, the only standard by which these values are judged as valid normative bases is the very subjective state from which they originate.

Even though this view describes our tendency to be guided by very individual sentiments, it is rather inaccurate because it fails to capture rationality of values and the necessity to evaluate them against an objective standard. Thus, it misses an essential element of valuing and it is difficult to imagine that anyone would object this. The fact that the dualistic view does not foresee that values should be judged as rational or not (does not entail objective evaluation), means that we must accept that there can be very little to none *reasoning* behind valuing. This unfortunate conclusion, drawn by many philosophers, is a consequence of the radical dualistic view of subjective values, as discussed above.

A moral or an objective judgement is indispensable to morality. It is obvious also if we relate this to real-life situations where we frequently *check* values based on desires. Whenever we believe that, according to own standards or some other accepted standard, values defined subjectively by another valuer (e.g. based on her or his desires) are wrong, we protest. For example, we believe that human rights are objective, i.e. they are valid for every valuer irrespective of what anyone may hold of them (although it can be expected that a large majority of people agrees with this statement). As a result, whenever subjective values clash with these objective values, it is generally believed that such objective values should override the

[17] This is an example of the conflation between the radical dualistic view of subjective values with Hume.

conflicting subjective perspective. However, this point, or an argument for objective elements of values, concerns a discussion to be held in the sections on objective values (see 2.2.3).
The same can be said about the possibility of relativism that also results from this dualistic subjective view (Callicott, 2008). This also is a disadvantage from the point of view of moral considerations as it does not sufficiently capture the fact that agents share many values. Morality in the normative understanding works under the assumption of values and norms being universally valuable for all valuers. Also, in a descriptive sense, values can be shown to be universal, at least the most fundamental ones. Values can be shared in a "bottom-up" manner, i.e. when they are defined subjectively and innately by a subject and yet, for some reason, subjects' values overlap. The purpose of capitalizing on the fact that some values are shared, is to ensure that all valuers have an equal access to these universal values. Moral standards safeguard that subjective valuing of some valuers does not negatively impacts the capacity and possibility to purse values by others. As a result, from the point of view of morality, objective standards are necessary.

2.2.2.2.2 Obscurity of the concept of subjective states of a subject and their reference to objects

The above discussions already expose significant shortcomings of the dualistic view of valuing. However, also other considerations can reveal that this view is rather idealistic and rests on taken-for-granted assumptions about how we value. According to the dualistic view, values depend on the subjective states of a subject, as opposed to anything that there *is* in the world. Subjective states of a subject are radically different from objects outside of it. Whatever subjective states are (and they indeed lack a more precise definition beyond being "sentiments" or "attitudes"), they must be radically different from objects. In fact, it could be argued that the reference to subjective states, or subjective evaluation, is commonly perceived as the safe way to avoid the is-ought fallacy. This is clearly because the subjective states of a subject are considered to be *purely subjective*, not objective or factual. As the is-ought fallacy, as commonly understood, forbids deriving norms (and values) from facts, seemingly the best way to justify norms, is with the reference to subjective states. In other words, subjective states are understood to have normative power. However, this is not necessarily moral normativity as such states and values they produce are not necessarily rational.

The question to face in this context is: do subjective states really have *no relation to objects*? Indeed, a deeper reflection reveals that the idea of subjective states as not associated with facts external to the subject is quite unconvincing. Subjective states, for example desires, seem to be influenced by many factors which may include facts external to the valuer. Our desires are

indeed innate and originate in our mind (or brain, whichever term is preferred). Nonetheless, our subjective mental states still can be linked not only to biological functions and predispositions (as chapter 4, 4.2, will show), but also to occurrences and facts taking place around us. In short, it is impossible to imagine that subjective states of a subject, such as passions or desires, have no connection to facts or objects external to the subject. Moreover, even if a certain desire is produced entirely within the subject's mind, its achievement requires reference to objects and the physical world. We act and live within the natural world and not within our mind. This is indeed what Putnam has pointed out with reference to the mind-body dualism.

Also in this context, philosophers (e.g. Putnam (2002) or Fuller (1958)) note that a reference to objects simply cannot be denied. The content of valuing is not some sort of divine revelation or inherent power of the mind that is entirely within the dimension of the mind and not dependent on the whatever is external to the mind. Putnam correctly notes that mental states require reference to objects. Moreover, the author argues that valuing is a dynamic, unstable and changing process. According to the philosopher, subjective internal states are susceptible to various external influences which can be both positive and negative by different standards. It depends on the influence of both external factors (objects, facts) as well as internal fluctuations within the valuing of the subject (Putnam, 2002). Putnam states that our subjective states involve a sort of inquiry: ""inquiry" in the widest sense, that is human dealings with problematical situations, involves incessant reconsideration of both means and ends; it is not the case that each person's goals are cast in concrete in the form of a "rational preference function" that is somehow mysteriously imbedded in his or her individual mind, or that all we are allowed to do as long as we are "rational" is look for more efficient means to these immutable but idiosyncratic goals or values" (2002, S. 97 - 98). Putnam's observations show that valuing, a process which takes place inside the mind of the subject, is influenced by facts and objects external to the subjects, as well as by reasons. We employ reason to help us achieve values, given facts.

Also Foot, in explaining reasons for action, shows that it is not just subjective desires, e.g. staying healthy, that are relevant. The reason *why* staying healthy is desired may precisely involve a reference to objects. The possible explanation of a reference to objects would be as follows: after all, staying healthy is a biological condition for living, which, in turn, is a condition for satisfying any other desire. Foot states that "(…) no special explanation is needed

of why men take reasonable care of their own future; an explanation is needed when they do not. Nor does human cooperation need a special explanation. Most people know that it is, for instance, unreasonable to take benefits and give nothing in return" (2001, S. 22-23). With this, the philosopher shows that there are certain facts about our desires that are not only universal but also refer to our nature or facts about our functioning.

One should point out that we make such references to facts because the world around us is characterised by objects and described by (such as descriptive laws of nature). Even considered as a tool for the mind, the body is an object characterised by biology. Thus, in pursuing our desires with the help of the body, we must refer to facts. Moreover, as Woodfield (1976) notes, objective structures to which we refer, such as biological facts about our health, are present irrespective of subjective intentions. Certainly, one could object that the point of the (dualistic) subjective view of values is that it is the mind, or the subject, that operates these facts. However, although true, this objection rejects dualistic assumption given that dualism suggests that subjective states cannot be connected with objects. Considering the fact that subjective states involve references to values and subjective states may be motivated by or reactive to facts (e.g. when one smells chocolate and suddenly has the urge to eat chocolate) reveals that subjective states refer to objects and often they are nothing more than values based on facts. Clearly, this demonstrates that against dualistic assumptions, subjective states are not radically separated from objects. As this shows that in producing such values, we refer to facts, the validity of such statements in the light of the is-ought problems can be questioned. While this will be a point addressed in chapter 3, 3.3, this consideration should show the obscurity of the concept of the subjective states as well as the doubt that the dualistic idea that such subjective states lack any connection to objects accurately reflects what values are and how we value.

A further consideration in this direction arises with respect to another type of debate. It is argued by many that *valuing* applies not only to humans but also to animals (Woodfield, 1976). For example, we can understand, in analogy to our own experience, that animals "value" instrumentally food or shelter, but also that they value intrinsically their own life as they defend it just like we defend ours because they behaviourally manifest these "values", or goals (Rolston, 1994). While it is beyond the discussion here to consider to what extent animals can be said to value, this point brings attention to the fact, that also humans follow urges and biological predispositions. This, in turn, leads to the question, to what extent biological functions and predispositions are responsible for *our* subjective states. It is not necessary to settle on this problem here (although this point will be explored further in chapter 4, 4.2,, and

5, 5.1.2.1). However, it shows that subjective states, such as *urges*, may indeed originate in our biology rather than in some mysterious subjective states of the mind that are radically different from the body.

Moreover, our valuing is not only dependent on objects, but is also biased and presumptive. We often value things without inquiring into what makes us value them. Frequently, valuing is influenced by "imposed" ideas about values in a top-down and often subconscious manner, for example by the culture in which we grow up. Cultural values are transmitted to us, very frequently subconsciously, when we grew up in specific cultures, based on a set of ideas, customs and institutions produced by human societies. Such cultural values are *assumed* and perpetuated, even though their justification is not always quite clear. There are many instances of conflict about such values where individuals do not agree with certain values carried by cultures, such as xenophobia or homophobia. Still, such values influence our subjective states, even though we are often unaware of this. This shows that, in such cases, subjective character of valuing is not entirely attributable to the inherent subjective states of a subject, or independent exercises of subject's minds. Some values are assumptions and replications of values transmitted to an individual, of which subjects are often unaware.

This brief discussion shows that the idea that subjective valuing is attributed entirely to some inherent internal states disentangles from references to objects is rather unrealistic. It is evident that dualism views subjective states in an idealised manner and its connection to objects is obscured. Indeed, one may be tempted to raise objections defending the attacked view – consider the point that even if referring to objects, it is still the subject and its subjective state that actually produce values. However, the objections to a literal interpretation of dualism and its implications involve non-dualistic points. This is not to say that such an objection is wrong; it is entirely correct. The point being made is that such an objection, and a defence of the dualistic view that it proposes, involves non-dualistic arguments. Similar point applies to the position of Kant (Callicott, 2012) which will be discussed in the following section.

2.2.2.3 Kant on subjective values: involvement of reason and projectionism

Kant's understanding, and interpretations of his understanding, concerning values as subjective and objective (based on Kant (2012) and Callicot (2012)) is relevant for two reasons. First, it is interesting because it contrasts with the dualistic view of valuing as it incorporates rationality as a necessary requirement of values. Yet, according to Callicott (2012), Kant's view is still within with the Cartesian framework. Although it may be disputed to what extent it actually is aligned with dualistic Cartesian framework, it certainly respects some Cartesian assumptions

about valuing. Kant's view is distinct because it proposes how subjective and objective elements of valuing can be reconciled, due to his reference to rationality and certain objective standards as indispensable in morality. Secondly, Kant's projectionism is a relevant concept in this work. This view is embraced by Michael Ruse which leads to an interesting position that will be scrutinised in chapter 6, as means to arguing for a reinterpretation of values as subjective and objective, considering their relation to facts. The present section will briefly outline the subjective elements of Kant's view, including "projectionism", while upcoming sections on objective values (2.2.3, and particularly 2.2.3.3) will discuss its objective elements.

First and foremost, it should be highlighted that whether subjective or objective, Kant is known to have emphasised the role of reason in valuing (2012). In this interpretation, valuing is a capacity that is necessarily linked with rational agents. Human beings can value *because* they are rational. This is linked with the fact that, as rational agents, human beings can confer both intrinsic and instrumental value. Kant states: "now I say: man and generally any rational being exists as an end in himself, not merely as a means to be arbitrarily used by this or that will, but in all his actions, whether they concern himself or other rational beings, must be always regarded at the same time as an end" (2012, S.26). Such rational beings can value also instrumentally objects that have a subjective value for them: "All objects of the inclinations have only a conditional worth, for if the inclinations and the wants founded on them did not exist, then their object would be without value" (2012, S. 26).

This view greatly emphasises the subjective character of valuing as valuing is not only a subjective act but also has a subjective value. It is interesting to note, that this quote does not directly imply that valuing must necessarily be rational. It suffices that it is carried out by beings that have a rational "nature" (or capacities): "rational beings, on the contrary, are called persons, because their very nature points them out as ends in themselves, that is as something which must not be used merely as means (…)" (2012, S.26). This capacity to be rational allows them to embrace values. In other words, it is said that this view proposes that values *supervene* on rationality (Callicott, 2012). With this view, Kant has complemented the subjective Cartesian view of valuing by highlighting that valuing can be carried out by "rational beings", but without suggesting that every value is necessarily rational.

Nevertheless, due to this emphasis on reason, Callicott (2012) argues that Kant's theory contrasts with Hume's. More precisely, it contrasts with the interpretation of values as depending on any subjective states or attitudes, rational or not. Callicott argues that there is a contrast between rationality and subjective states in the views of Kant and Hume. However, as noted above, Kant does not directly speak about the rationality of values, but about the rational

capacity of valuers. It is true that the philosopher highlights the role of reason. This should imply that reason accompanies the process of valuing and we value things because we are convinced by *reasons* for why they *should be* valued. We can subjectively *embrace* values because they are valuable, based on arguments. In fact, as will be discussed in 3.2.1, even despite emphasising the role of sentiments, Hume (2011) conceived of the role of reason in a very similar manner. In effect, the differences between Hume and Kant with regards to the role of reason against subjective states are not necessarily as pronounced, as both philosophers similarly acknowledge both elements as present in valuing.

It should be pointed out that it is not always easy to neatly differentiate valuing based on reasoning from subjective, arbitrary states such as desires. We frequently value based on both, reason and desires and they interplay with each other to differing degrees. Moreover, if not formulation of values, then their pursuit involves reasoning, no matter how evil the value. Subjective states and reason both influence valuing and observing their role depends on the perspective. From the descriptive point of view, valuing may be more or less rational. After all, *in reality*, emotions and sentiments have a role in valuing which sometimes leads us to undermine rational choices. However, they also have a role in helping us embrace reasons. Still, from the normative point of view, valuing should be rational (as law should be moral).

Although it was said that a subjective meaningfulness of values promoted by Kant conforms to the dualistic Cartesian framework, the emphasis on reason provides certain contrasts to that view. The idea that reason may be involved to valuing grants that valuers may refer to things beyond their subjective states, which is why they need reasons, i.e. to justify them. Moreover, if values can be justified with reasons, then values can also be prescribed externally to the subject, and/or the subject can embrace such values. This contrasts with the idea that values result from innate processes of the subject. In fact, this ability to prescribe values characterises the concept of objective values. If values can be prescribed to subjects because they are rational for subjects, then they refer to things external to subjective states and they are objective. In fact, this is not all that confers an objective understanding of values to Kant. The objective character in this view will be further discussed in 2.2.3.3 while this section will continue to focus on outlining the subjective elements of Kant's interpretation.

Kant's strong emphasis on the idea that values are subjectively meaningful and formulated by actors (2012), among others, became known as "projectionism" (Callicott, 2012). Indeed, with projectionism, Kant greatly highlighted the subjective aspect of valuing, i.e. the fact that values are formulated and embraced by valuers. In other words, values are produced in the sense of being "projected" by valuers. In this view, values and purpose have a heuristic nature: they

does not exist in reality, but are projected by capable agents (Ruse, 2017). In other words, there is no value or purpose *ontologically* but only *epistemologically* (Toepfer, 2011). Values and purpose have a heuristic value and character as they help one make sense of the world. However, they do not exist objectively, in reality, or beyond the interpretation of this reality. We "project" an interpretation: "in some sense we impose the organization on the world, projecting ends" (Ruse, 2017, S. 85), although this is only our interpretation of what is in the world ontologically. For example, we project the value to a beautiful landscape, even though the beautiful landscape does not *have* a value. The same applies to other elements of biology: we project a value to our organs, although they do not have a value, except to us by the virtue of our projection. Ruse also refers to it as "value-impregnating" the world (2017). Values and their content are produced by valuers and do not exist detached from valuers[18].

At the same time, although it is us projecting the meaning and values, we have the impression that we "read them out" (Ruse, 2017) of the world *as if* they were there ontologically, in reality. However, their presence is an illusion. Woodfield describes projectionism as a view, according to which valuers "project on to things a "property" which the things do not really possess. The average man does not know this. He thinks he is saying something about things when he uses teleological sentences. According to projectionism, this is an illusion. What he really is doing is metaphorically projecting his own teleological attitudes into the world. He is saying, in effect, "It looks to me as if an intelligence was at work here". His utterance masquarades as a categorical assertion about reality, but really it expresses his own state of mind" (1976, S. 26). As this involves the view that values have no "anchor" in the external world and are at valuer's discretion, one could object, as above, that projectionism is linked to arbitrariness of values and relativism. While projectionism highlights the essential epistemological characteristic that value is produced by the valuer (regardless of whether it is based on sentiments and/or reasons), its denial of ontological existence of values is perplexing. Perhaps it is unclear what "ontological" means in this context. Ontology is a concept that refers to the nature of things, how they *are*. Often what *is*, is explained by reference to empirical evidence, because this is the only, or the best, way to know what *is*. What, then, would it mean that values exist ontologically? It would mean that they have a nature which can be explained by reference to what *is*, i.e. a reference to external world and empirical facts as opposed to internal states of a subject. So, how can values not have any ontological presence (only epistemological presence)

[18] The use of terms such as «produce» and «formulate» in the context of a value should refer to the epistemological process of producing or embracing a values by a capable agent.

if, according to Kant, they can be *reasoned about* and are objective and universal for valuers (see 2.2.3.3)? Kant accounted for the shared human nature as the reason while we project the same values, at least to a certain extent (2012). This suggests that valuing involves a reference to things external to valuer. Thus, there is something characterising values beyond their epistemological character.

This very brief overview of what came to be known as projectionism, which is another interpretation of subjective nature of values, shows that neither version of subjective values alone can sufficiently explain values (nor that it can be said that there is nothing ontological about values). A reference to rationality is necessary, not only for moral purposes, in order to avoid arbitrary values, but also because values are objective and universal, as will be elaborated in the upcoming section. This rather quick outline expose problems and issues which will be highly relevant in the next chapters. After outlining and scrutinising the objective understanding of values, the work will make further references to Hume (3.2). Projectionism, epistemological and ontological understanding of values and their relation to facts will ultimately be directly addressed in chapter 6.

2.2.3 Objective values

Despite the dualistic framework according to which values are subjective, as opposed to being objective, the idea of objective values persists and is inevitable in moral philosophy. Callicott (2005) claims that "some philosophers working well within the metaphysical constraints of Modern philosophy claim that (…) intrinsic value is not merely conferred or ascribed by valuing subjects, but that it exists objectively" (2005, S. 353). Callicott makes this statement specifically with reference to Kant, as discussed above. However, given that Kant did accept the idea that values are objective, it is inconsistent to claim that it adhered to dualism or remained "within the metaphysical constraints of Modern philosophy".

Perhaps a good transition to discussing the objective view is to highlight why objective values are problematic within the dualistic framework. In line with the subject-object dualism discussed in 2.2.1, Putnam states that the problem refers to the "correspondence to objects" (2002, S. 33). The dualistic view, as outlined in 2.2.1, suggests that if values are not derived from subjective states, they are derived from things external to the subject, i.e. from objects. Note that *objects* may be understood in several ways. For example, these can be any values that are prescribed or given externally to the subject (including reasons), or as facts that describe objects of valuing. The former may involve any externally prescribed values and norms, including reasons. The latter may be facts, such as about how we function or tend to value (e.g.

that we tend to value life). Reference to objects may also generally mean reference to any facts about the natural world.

If values originate entirely in the object, they are facts and they cannot be values. Searle states that "(…) the descriptive statements the question of truth or falsity is objectively decidable, because to know the meaning of the descriptive expressions is to know under what objectively ascertainable conditions the statements which contain them are true or false". They are "capable of objective or factual truth or falsity" (1964, S. 53). Objective values refer to values which are not entirely dependent on individual subjective states; instead, they refer to facts. In other words, it is either true or false that a value is valuable, irrespective of whether a subject values it or not.

Indeed, many authors who advocate objectivism point out that in valuing, we continuously refer to facts and that valuing cannot be detached from the outside world (see 2.2.2.2.2). Objective values are said to be objectively decided, i.e. with reference to external objects rather than to internal subjective states. Objects influence, or even define, the content of a value, whether it is a reason external to the valuer or a fact about something. Moreover, such objective values are true and valid for all valuers.

Godfrey-Smith (2005) refers to the objective view as follows: "the assignment of a value depends on the objective fact of whether an item possesses a particular property which is taken to be valuable; (…)" (2005, S. 321). Or "according to the realist account of values, what is of value depends upon objective properties which are quite independent of human choice and preferences. Statements of value can, on this view, be derived from statements of fact" (2005, S. 323). Godfrey-Smith's description parallels Putnam's "correspondence to objects": an objective value corresponds to an item (an object) which has a valuable property.

From the radical perspective of dualism, the idea of objective values suggests that values are entirely defined by objects, irrespective of subjects. In order words, values correspond entirely to facts rather than to subjective states. This is either-or understanding (values originate either in the subject or in the object) is characteristic of dualism. Just like the subjective view cannot be reconciled with the objective, so cannot the objective view be reconciled with the fact that values need to be subjectively valued.

Godfrey-Smith captures the dualistic conflict between objective and subjective interpretation of values in the following way. "On one account it is claimed that we can ascribe a value to an object independently of whether that object is actually valued; values on this view inhere in the object quite independently of the existence of evaluators. This is a realist or objectivist account of values. On the other hand it has been argued that it makes no sense to ascribe values to items

where this does not answer back to the preferences of evaluators" (2005, S. 318). This characterization conveys certain points about a possible understanding of the objective view. According to Godfrey-Smith, objective values exist independently of valuers' subjective states: value "inheres" in them "independently of the existence of evaluators". As the author points out, this characterisation raises questions: how is it possible to value without valuers? And, as Godfrey-Smith points out, why should something be a value if it is not valued?

This brief account outlies a dualistic understanding of objective value. It is dualistic because it manifests an either-or understanding of values that refer to objects, and as radically separate from subjects (as they "exist independently of valuers" and do "not answer back to the preferences of evaluators"). Following the earlier rejection of dualism, one should agree that dualistic characterizations of objective value should also be rejected. The following sections will discuss a plausible understanding of the concept of objective value. Further problems pertaining to its dualistic understanding will be discussed towards the end, in 2.2.3.4.

2.2.3.1 The epistemological aspect of valuing considering the reference to objects

Even in the brief introduction above, the reader will be perplexed by the use of terms such as "define" values and how this can be explained in the context of objective values. Indeed, the nature of the expression "to define values" differs with dualistic conception as to whether values are assigned *entirely* to the valuer or *entirely* to external objects. According to the subjective view of values, values are *formulated* by valuers because they are necessarily dependant on the epistemological exercise which can only be performed by valuers. In the dualistic context, "to define values" has a literal meaning because agents define values. This contrasts with the objective view introduced above where it seems to be metaphorical as objects cannot, literally, define values. From the metaphorical perspective, values are defined by objects in so far as the characteristics inherent in the objects are "transposed" to values. This metaphorical understanding adheres to Kant's view of valuing. Indeed, the idea that values are "formulated" by non-agents, in the sense that the process formulation of values is an epistemological exercise, would not be entirely understandable. They cannot be literally formulated by objects because objects are not agents and do not have the capacity to define values in the literal sense as they cannot value and reason.

It is beneficial to highlight this point. Epistemology concerns the formulation of concepts. It is true that values are *formulated* in an epistemological act of a valuer who embraces things as values. The epistemological understanding of values concerns the characteristics of values as a *type of concept*, which also concerns the characteristics about how they are formulated (for

elaboration of this idea, see chapter 3). It is sometimes said that an alternative view to Kantian projectionism (or the subjective view, generally), would suggest that values exist ontologically (Toepfer, 2011), or that they have some ontological characteristics[19]. Ontology is a concept that refers to the nature of things concerning how they *are*. The ontological understanding of values would focus on the ontological references which are present in content of a value. In contrast to the epistemological perspective, this view is not concerned with the type of concept that values are or how they are formulated. It can be observed that these two understandings apply to two different ways of looking at values: from the perspective of the type of concept, how they are formulated and what types of statements they are, and from the perspective of their content, what they refer to.

Based on this, it can be argued that debates about whether values exist epistemologically *or* ontologically are misled and should not take place. The ontological understanding of values refers to their content and what ontological phenomena or things they refer to. It does not concern the question how and by whom values are formulated. The question of values being epistemological or ontological does not have to be an either-or question: both views refer to values in a different manner. Values can be epistemologically formulated by agents capable of formulating them (and objects are not such agents). At the same time, they can have certain ontological characteristics. Thus, to say that there are some ontological characteristics about values, is not to contradict that values are formulated and embraced by valuers. It is to highlight the fact that, in a certain way, values contain references to objects. These references to objects are actualised by valuers because it is valuers who refer to objects. This explains why values can be objective and universal, as Kant (2012) advocated even within the framework of "subjective" projectionism.

Thus, the concept of an objective value does not have to be entirely detached from the agent and their valuing. Having certain ontological characteristics does not deny that, in order that value are meaningful for an agent, they have to be valued and embraced by valuers (and/or *formulated* by them). This is irrespective of how and to what extent values can be explained as containing references to objects and/or to subjective states.

Consequently, and alternatively, one could say that Godfrey-Smith's account (2005), or any dualistic account that states that values are *defined* by objects, should be understood as suggesting that it is the *content* (and its characteristics) of a value that is somehow related to

[19] The argument in this work does not follow the idea that values exist ontologically, but that values have certain ontological characteristics, i.e. references to ontological phenomena or things.

the ontology of an object. This interpretation of values being defined by objects contrasts with the interpretation of values focusing on how they are formulated. This latter interpretation highlights the characteristics that pertain to values as a type of concept and the fact that they are formulated as a matter of an epistemological exercise of an agent.

It still remains to be discussed how precisely one can non-dualistically balance the epistemological and ontological perspectives on values, i.e. the fact that they are embraced and formulated by agents and that they contain some references to objects. To put it differently, it remains to be elaborated how values can involve references to objects, without detaching them from the concept of a valuer. As Godfrey-Smith rightly observes, it is a valid question for a non-dualistic objective theory of value to elaborate on their relationship with the valuer while claiming that values "refer to objects". *Why* do valuers refer to objects in valuing? What prompts them (what is the reason) to do so? This problem of objective value's relevance to the valuer will be elaborated on in the next section. As the differentiation between the epistemological and ontological understanding of values and their relation to facts is, actually, discussed across the remaining chapters, chapter 6 will conclude on this specific point of the balance between subjective and objective aspects of values.

2.2.3.2 Reason and the relevance of objective values to the valuer

The next important question that arises from this consideration is: if values need to be *valued*, embraced by valuers, could it be possible to *prescribe* values, give reasons for values being valuable? Is it possible to *convince* someone to value something because it is valuable? In this regard, Kant's (Callicott, 2012) emphasis on reason can be a solid and an uncontroversial benchmark. While the Kantian view contrasts with the idea of values as desires or urges alone, it indeed seems to appeal to the rational character of human nature. We value certain things because there are rational arguments to value them. Certainly, many of us can refer to specific examples in their experiences when *arguments* about a value of a thing overrode their desires. In everyday life, we accept and reject values and norms *based on reasons*. As many observe (Ruse (2017), Putnam (2002) and Godfrey-Smith (2005)), we may be wrong about what is actually valuable. There are many instances of this throughout history where "moral revolutions" and "frequently cited extension of moral concern to include a progressively wider class of human individuals; strangers, slaves, and so forth" (Godfrey-Smith, 2005, S. 324) have taken place. In fact, this is what Godfrey-Smith refers to as a solution for the arbitrariness of the subjective view of valuing. He states that, according to the defence of the subjective view,

the arbitrariness of subjective valuing can be prevented as "in any decent disagreement it will be possible to marshal reasons for or against the preference expressed" (2005, S. 321).

In fact, as a result of Hume's emphasis on the subjective states, or attitudes, such as passions and sentiments, it is often overseen that Hume indeed perceived reason to have a role in valuing. Hume stated that "(…) reason, in a strict and philosophical sense, can have influence on our conduct only after two ways: Either when it excites a passion by informing us of the existence of something which is a proper object of it; or when it discovers the connexion of causes and effects, so as to afford us means of exerting any passion" (2011, S. 193). Hume believed that reason can "excite a passion" and lead one to value something. This could be interpreted as a reason *convincing* the subject to embrace a value by means of reason's stimulation of subject's desires. Despite the possibility of a dual understanding of Hume's position, this quote certainly shows similarities between Kant and Hume (Hume's position will be addressed in more detail in chapter 3, 3.2).

As was discussed with reference to the subjective view of values, the feature of the objective account of values that refers to the involvement of reason is essential, especially in moral contexts. For the purpose of outlining an understanding of objective values that will be a starting point for further discussions, one is led to accept reason as a necessary element of objective values. The idea of objective values capitalizes on another important aspect of values: the fact that such values are universal. This indeed is linked to their *rationality*: values can be prescribed externally to valuers because they are justified as rational. Valuers embrace these values due to reasons. If they are rational and can be prescribed to valuers, they are valid to all valuers irrespective of their different subjective states. In other words, they are universal.

Godfrey-Smith's challenge, the question about how values can be given (prescribed) to valuers, is answered by suggesting that valuers are *convinced* to embrace values, based on *reasons*. Perhaps such reasons may even stimulate their desires. Thus, while reasons provide the possibility to externally motivate the agent to value a certain thing, it is still the subjective individual decision of the valuer to embrace this value. In order for values to be embraced, the reasons must be relevant for the valuer. One can point out that objective theories involve both what is *valued*, i.e. what valuers tend to value, and what is *valuable*, i.e. the reasons why a thing should be valued. This highlights how objective values can be prescribed externally to a subject, and still be relevant for that subject.

There is another way of explaining the relevance of objective values to valuers. An analysis of a concrete example of a theory of objective values may help to show that objective values are

not, as Godfrey-Smith might have suggested, irrelevant in terms of valuers' subjective states. In his version of natural law theory, John Finnis (1980) suggests an objective and universal set of *basic goods*: life, knowledge, play, aesthetic experience, sociability, practical reasonableness and religion (1980). The immediate question that comes to mind is: how does he justify this selection and how is it relevant to being valued? These suggested values are not detached or irrelevant to subjective evaluation of individuals. Finnis does not suggest "imposing" arbitrary values on individuals (as, for example, cultural values are). More precisely, there are two reasons why such values, theoretically, can be understood as valuable for valuers and why valuers may indeed be interested in valuing them (presented not in the order of priority). Firstly, one is attentive to the incidence of subjective valuing by *observing* what is being valued by (at least, the majority of) valuers. It is *partly* because *we usually value* life, knowledge, play, aesthetic experience, sociability, practical reasonableness and religion, that Finnis describes and at the same time prescribes them as basic goods. This clearly means that these values are not irrelevant for valuers and can be embraced by them as *valued*.

The second component which helps identify objective values refers to the fact that they are *valuable*. In various ways and by means of various arguments, we employ reason in order to agree whether certain values, such as those we *tend to* value as proposed by Finnis, should be pursued. In other words, this involves *objective evaluation*, i.e. an evaluation of values against certain fundamental standards, provision of reasons about what makes these goods worth pursuing from the moral perspective. To state that what is observed to be valued is what should be valued without justifying *why* it should be valued, i.e. why it is valuable, (except for just stating the fact that it is valued) would be an unjustified derivation of a norm from a fact. This way one could "justify" any tendency humans have. Thus, it is necessary to provide reasons for why proposed values should be valuable.

In case of natural law theory, such rational justification about what is valuable goes hand in hand with describing what *is* natural (i.e. valued), or the rational nature of a value has primacy over its natural character as Finnis claims (1980). As Pauline Westerman (1998) observes, this is why Finnis aims to demonstrate a reasoning from *desirable* to *desired*, rather than from *desired* to *desirable*. This approach involves a mixture of observation of human valuing as well as reasoning about these observed tendencies. In the outcome, what is natural from the perspective of natural law theory, is necessarily rational. This is an attempt to balance a reference to our tendencies, relevant to us in so far as they refer to subjective states, with their rationality. In fact, natural law theory usually faces the challenge not from the perspective of

explaining why prescribed values are relevant to values, but vice versa: justifying that observed values (relevant as they are based on our tendencies) are rational.

Furthermore, interestingly, this example of objective values refers to both descriptive and normative understanding of morality. Not only is an observation made by Finnis about what is *valued*, but also it is justified about what should be valued, thus is *valuable* (in a normative sense that involves reasoning). Critics often undermine the presence of the second component and object that such theories commit is-ought fallacies. Critics see these theories as suggesting that values are defined solely by the objects of valuing, such as health, and are based on what we tend to value (we *tend* to value health). We do value health but the *fact* that we value it cannot be the justification for why we *should* value it. Health is valuable because there are reasons to value it.

Values can be objective and yet have a subjective aspect because, ultimately, it is the agents that embrace reasons and values. Valuing is not detached from valuers and from the epistemological process in which they are produced. They are either convinced by reasons to objective values, or such objective values as rationally validated subjective values, as in the case of Finnis (1980). The rational justification, or objective evaluation, is necessary in order to show which values, for example among those that are valued, are valuable. As in the case of natural law theory, reason "filters" our tendencies in order to *justify* values. What is valuable is discovered by reason and it is not necessarily what is valued.

The contrast of this objective view of values to the subjective view should be evident. The dualistic subjective view (frequently also assigned to Hume) suggests that values are whatever is *valued*, based on subjective states. The objective view adds that values are *evaluated by reason* in order to identify which values are rational. As such, it helps overcome irrational or immoral "blind spots" of subjective values which may be based on desires or other potentially irrational and immoral subjective states. Without a rational reflection, one may oversee that something *not valuable* is valued only because the subject has had a tendency or a predisposition to a certain value or was "taught" to value it by the environment. There is a significant benefit to involving reason into valuing that may justify Kant's emphasis on rationality (2012) (see 2.2.2.3).

Thus, the main contrast between objective and subjective view of valuing is that the former necessarily involves reason. Reason makes references to objects that are external to valuers. And yet, even though objective values are primarily justified with reference to reasons rather than subjective states, they are still relevant to valuers. Valuers either embrace them based on

these reasons, or such values are indeed subjectively identified inclinations of valuers that are validated by reason. This should address the challenge of Godfrey-Smith (2005). While Godfrey-Smith's challenge manifests a dualistic understanding, the proposed explanation is of a non-dualistic nature.

2.2.3.2.1 Objective evaluation against assumed fundamental values

In this context, an important observation with regards to reasoning about values should be made. In order to justify why something should be valuable, one has to assume some fundamental values. For example, such assumption is present, often implicitly, when we say that something is evil. In order to (objectively) evaluate something as bad, evil, or good, we must have assumptions about what defines good or evil. In his justification why certain basic goods are fundamental, Finnis must assume a standard against which these basic goods are justified or objectively evaluated as good. Similarly, authors such as Philippa Foot (2001) must have an assumption of a fundamental standard that allows her to define "goodness". According to such a fundamental standard, things are evaluated as good and bad.

Such assumed standards are fundamental to making objective value-judgements. In the subjective view of values, values are judged against subjective states, rather than against some fundamental rational standards. In an objective view of values, evaluations of values are made against objective standard. Such standards are often obvious or implicit. For instance, a common fundamental value against which evaluations are made is the intrinsic value of life. However, in many contexts, it is beneficial to be aware of such assumptions.

Thus, this sort of evaluation, we may refer to it as objective evaluation, contrasts with subjective evaluation outlined in 2.2.2.1. In this case, we evaluate not against arbitrary, subjective desires but against given – perhaps rational, moral – objective standards. Such objective standards are justified antecedently and irrespectively of subjective states. In such case, we embrace a certain rationally-justified values as basis and evaluate against it. In other words, one formulates further values assuming a certain objective fundamental value, rather than a subjective state. Or, alternatively, the subjective values (values formulated based on subjective evaluation) are evaluated against these subjective standards.

Thus, in contrast to subjective valuing (i.e. valuing based on subjective states), such objective valuing (based on objective standards) necessarily involves employment of reason in case of formulation of values (goal-setting) and their pursuit (goal-pursuit). Reason is involved to help judge and embrace values, whether these are values that the agent choses to subjectively embrace due to reasons, or whether these are subjectively evaluated values that are validated

by reason. This procedure of objective evaluation against fundamental objective values or norms is characteristic of moral exercises.

Thus, in cases of subjective and objective evaluation, values are formulated, justified and embraced but in very different ways. It is useful to maintain this differentiation between subjective and objective evaluation in the manner in which we value and evaluate as it helps to highlight the presence or absence of reasoning. Also, the term "value judgement", synonymous to "evaluation", has a different meaning in case where agent values either based on their subjective states, or based on reason.

2.2.3.3 Universality of objective values (and the fundamental value of life)

The above discussion concerning the involvement of reason and the epistemological act of valuing highlighted in the subjective view shows that values can be objectively rational and subjectively embraced by valuers. The interesting necessary characteristic of objective values is that they are universal, i.e. valid for all valuers, as opposed to subjective values, which are valid only for individual subjects. This is partly linked with the reference to objects and reasons which confer its universal and *beyond-subjective* character. Objects and reasons are usually valid for all valuers, while subjective states are valid only individually. A subjective state, such as desire, is experienced only individually and a value based on it is relevant only for the subject, individually. In contrast, values justified with reference to objects and reasons are valid for whomever such justifications are valid.

However, in part, the universal character of objective is also linked with what we tend to, subjectively. This was also discussed above, with reference to basic goods proposed by Finnis (1980). Such goods, which are valued subjectively (relevant subjectively) are not valued by one individual valuer, but by all valuers, individually and subjectively and yet collectively. Some subjective values, which can be validated as objective, are shared by all valuers. The paradigmatic and the special case of this phenomenon is the value of life.

In order to understand the universal character of objective values and to further elaborate on the fact that values have both subjective and objective components, with reference to the value of life, it is interesting to refer to Kant (2012). Kant famously states that human beings are "objective ends, that is, things whose existence is an end in itself; an end moreover for which no other can be substituted, which they should subserve merely as means" (2012, S. 26). Kant justifies this with reference to the fact "man necessarily conceives his own existence as being so; so far then this is a subjective principle of human actions. But every other rational being

regards its existence similarly, just on the same rational principle that holds for me: so that it is at the same time an objective principle, from which as a supreme practical law all laws of the will must be capable of being deduced" (2012, S.26). The interesting point here is the transition between the subjective perspective to the objective perspective ("just on the same rational principle that holds for me: so that it is at the same time an objective principle").

The transition from subjective to objective perspective is very unconventional. We usually argue the other way around. Kant asserts that humans think of their existence as ends in themselves, *thus* we *ought to* perceive them as ends in themselves. One could argue that the inclusion of the *fact* that something is valued is simply a factual statement about what *is valued*. Something being valued, or a presence of a tendency to value, is not a *reason* for moral purposes. What is valued can be arbitrary, irrational and unmoral. In the same manner, Kant could have said "men necessarily think of themselves as being superior to women" which in terms of justifying the move from *is* to *ought* would be no different from the former statement.

However, discussing this statement, Callicott (2005) claims that it is not a typical is-ought fallacy where a norm (about how we should value, objectively) is derived from a fact (about how we tend to value, subjectively). This is because the subjective statement about what is valued ("man necessarily conceives his own existence as being so") is *not only* descriptive but also evaluative, i.e. includes a subjective value-statement about the fact that humans value their existence as ends in themselves. Callicott claims: "nor does he commit the naturalistic fallacy by arbitrarily (and self-servingly) asserting that rationality is a value-conferring property. One values (verb transitive) oneself intrinsically. "Thus far," Kant carefully notes, ones intrinsic value "is a subjective principle of human action"" (2005, S. 354)).

Callicott makes a good point which, interestingly, applies particularly (perhaps exclusively) to the case of valuing life. In the case of "valuing oneself" there is a difference to other kinds of subjective valuing. While people may disagree about many values, nobody really disagrees about the fact that one values oneself. The case of valuing oneself is the paradigm case of *universal subjective* valuing. Everyone agrees that their life is valuable as everyone does everything to sustain it (and we consider those who do not mentally ill).

So, the justification for this value is not just the *fact* that life is valued, but the fact that I, or anyone else investigating this statement, can refer to their own valuing and validate this evaluation. It is a universal subjective value in the sense that it never changes and has been and will be true of any human being. We have always been valuing our lives and will continue to

do so because this is what allows us to carry on with any other business. We value and act because we are alive. Thus, in carrying on with our business, we need to stay alive and sustaining our life is valuable for this reason. Life is a precondition for valuing any other things and pursuing any goals, whatever they are. Next to being intrinsic, the value of life is also instrumentally fundamental to our functioning. This is true, even though we may pursue this value in radically different ways.

The universality of the value of life is unique. I value my life and that I and every other human being ever born values their life is a universal fact. The value of one's life is so inherent, fundamental and universal that it is difficult to decide whether it is first and foremost a fact or a value. Addressing this point would probably depend on the context. For example, looking at it through the perspective of natural sciences, one would say that it is a fact first and foremost because, unless biology through evolution has developed our species, we would not have been able to value at all. In order to be able to value, we must first be born and develop this capacity which is given to us through biology. However, a philosopher may disagree and state that unless we can value and reason, none of these facts are relevant, because they cannot be understood and appreciated without a valuing capacity, even though they may still be objectively true. It is the chicken-or-the-egg dilemma; however, we do not need to provide an answer to it. The purpose of this consideration was to point out the special status of the value of life, which probably is the reason why Kant was able to make his argument without much controversy. Kant referred to it as a fundamental value against which objective evaluations, universally valid, for all valuers are made and from which other objective values can be derived.

Callicott (2005) himself discusses why is it that in the case of the value of life, one can transition from objective to subjective and from subjective to objective view, from fact to value and from value to fact. Kant's transition is from subjective to objective value: "Kant immediately claims, nevertheless, that it [subjective perception of value] somehow becomes "objective" when one considers that others value themselves in the same way" (Callicott, 2005, S. 354). In the absence of explanation for this, Callicott suggests two of his own. Taking the second one first, Callicott suggests that "when one realizes that other value themselves as one values oneself, then one transcends the limitations of one's subjectivity. (…) This transcendence of subjectivity operationally, but not actually, objectifies the value of others. That is, to realize that other rational beings value themselves as one values oneself – to wit, intrinsically – provides the functional equivalent of an objective property available to disinterested observation" (2005, S. 355). In other words, Callicott suggests that the knowledge

and understanding of how we value sets up obligations towards others, because we know, by reference to our own valuing, that this valuing of others is an example of intrinsic value. This is similar to the explanation provided above. Callicott calls this a "functional equivalent" of objectivity, in order to emphasise that Kant's did not trespass the boundaries of Cartesian subjective values (which, given his reconciliation of subjective and objective elements, seems rather unconvincing; Kant's theory can be argued to be non-dualistic).

The other explanation refers to the fact that "rationality is the same – in the string sense of identical – in all rational beings" (Callicott, 2005, S. 354). In other words, it seems that rationality, and the values it leads to, are universal. So, universality, as already stated before, makes subjective perception objective, because it is shared and universal. In fact, it can be argued that this explanation is not very different from the previous. There, the idea behind objective value is that intrinsic value of human life is an objective fact (and/or value) because we know, by reference to our own valuing and due to the observation, what others value intrinsically. We value the same because we reason the same. However, there must be something more that explains why we value and reason in the same manner. Similarly, there must be something more that explains the reason why objective values are possible. Indeed, elsewhere, Callicott refers to the source of this universality being in evolution through natural selection (1985). It seems that finding an answer to these questions about what makes values universal will help provide a more comprehensive understanding of values as objective.

With regards to the issue addressed above, Callicott understandably asks further: why does the fact of universality make values objective if they are still subjectively conferred? This is a very important question indeed. It shows that there is much more to understanding values than the traditional either-or view of values as either subjective or objective and as such compels one to reconsider how reference to facts, or object, should be non-dualistically understood. Indeed, many questions that need answers can be raised. Why such a fundamental value is so universal that it can also be said to be a fact? How, more generally, should we understand the fact that values are shared and universal, in terms of how they are linked to facts? In other words, how can we reinterpret the idea of reference to facts, as objective values are understood, in order to account for the subjective aspect of valuing? If the reason why values can be universal and objective has to do with something external to the valuer, it is either true or not. Why are facts valuable and so relevant to subjects that they can be valued at the same time? What explains this relation? So, the central point for the objective view is precisely the question why is it that values can be produced with reference to objects external to valuers, based on facts, not just

based on subjective states of a subject. This reference to objects or facts made by valuers, as will be argued in chapter 5, is linked with an ontological relation between biological facts and values.

The universality of values that contain references to objects which are biological facts and the status of the fundamental value of life are connected. It is very relevant for this work which tackles specifically biological facts. They highlight a certain link between such natural facts and values which requires exploration. Certain values are universally valued but also universally valuable and an explanation of why this is so refers to objects, facts. It is evident in Kant's transition from subjective to objective value (2012) and it is also evident in Finnis's version of objective basic goods (1980). The challenge is to provide an explanation of this phenomenon at a meta-ethical level with a due address to recognising valuing as an epistemological exercise and, thereby addressing objections captured in the is-ought problem.

2.2.3.4 Issues concerning the view of objective values

Even though the sections above have attempted to present the view of objective values by clarifying certain issues pertaining to the concept and respecting the epistemological characteristics of value as an act of valuer, some problems remain to be discussed. Remaining issues refer not so much to particular elements of the concept, but to a more general perception of objective values. The two sections below will expose and address dualistic interpretations of objective values that pertain to the concept.

2.2.3.4.1 The dualistic view of objective values as a transcendent set of moral norms

A very popular view which is often attributed to objective values is that there exists a transcendent set of moral norms which are permanent or transcendent and given irrespective of subjective valuing. It is an ideal which we should accept *as a given*, similarly to the way we believe in the transcendent validity of the 10 Commandments. Such values are understood to have been *designed* (literally, in the epistemological sense) independently of valuers. In fact, this understanding is strongly linked to a belief that values originate in an external source, such as God. This is a radical interpretation of reference to objects, where object is a set of norms such as 10 Commandments as opposed to subjectively defined states of a subject.

This view is not only characteristic of religious positions but is also often attributed to ancient philosophers such as Plato and Aristotle as it is argued that they have promoted transcendent design of values and norms. Amusingly, Putnam refers to this view, according to which values are "cast in concrete", as "rampant Platonism" (2002). Also Ruse associates it with Plato and

Aristotle and he is a philosopher who interprets objectivity in this dualistic manner (2017). This is evident in Ruse's understanding of three possible frameworks which can generally explain values (and purpose). This way of understanding values (and purpose) is notably dualistic as it refers to values *either* as entirely objective *or* as entirely subjective. In short, the three frameworks are: "the Platonic kind, where the deity gets involved directly and does the designing. There is the Aristotelian kind, where there is a kind of internal force or spirit that directs things—perhaps more a principle of ordering. And then there is the Kantian heuristic kind, fully compatible with mechanism, where in some sense we impose the organization on the world, projecting ends because we cannot do biology without them (Ruse, 2017, S. 85)".
The "Platonic kind" is a framework which involves a god-like designer who designs the world. Designing the world includes designing humans, their nature and, what follows, their values. Thus, according to this view, values are "cast in concrete" (Putnam, 2002) because they are designed beyond valuers and the design is "binding" on valuers. It is clear why such a Designer ("Demiurge") features in Plato's view, as there is an explicit reference to such a being. However, it is less obvious that it has a role also in Aristotle. In the Aristotelean view (neo-Aristotelianism), according to Ruse, there is no direct and explicit reference to such a being, designer, but there is a design which is guiding the world and the valuers. Because there is a design, and ultimately things are directed in a *certain* way, an omnipotent designer is necessary in Aristotle's theory. In Aristotle, the designer is perhaps not involved directly and is not actively present, but is hidden and works indirectly: "although Aristotle did away with the Demiurge, an efficient-cause God, he kept with a final-cause God, seeing that values make little sense without a valuer or valuers. We and all of creation strive to emulate It, because It is good. Neo-Aristotelians (unlike Neoplatonists) tend to make less of the gods or a God, but one senses that in some way they feel that human life in itself is of value and that nature strove to produce it because it was good" (Ruse, 2017, S. 151). For Ruse, the fact that there are *given* transcendent values towards which we must supposedly strive, implies a god-like being who has cast values "in concrete" like the 10 Commandments. In other words, the divine design is the reason *why* we value as we value. Ruse is one among those philosophers for whom there is no other possibility to interpret objective values but with a reference to a god-like designer which explains why values can be entirely referred to as objects external to subjective states.

According to this view, values can be understood as externally given to valuers. Evidently, this interpretation has a dualistic character, or even is characteristic of a dualistic understanding of objective values because it entirely detaches valuing from the subject and attaches it entirely

to external objects. This is an example of a frequent interpretation of objective values according to which values exist *independently* of valuers, as was stated in Godfrey-Smith's interpretation (2005). Even though this view is widely criticised, it is often understood as the only possible explanation of objective values in the dualistic framework. If values are entirely referred to objects, the only candidate is a divine, transcendent set of norms which has been designed by a source equal or more powerful than humans, such as god-like beings or other sorts of divine transcendent sources.

Except for the fact that this is an unconvincing radical dualistic interpretation, also a reference to a divine source is implausible in secular scholarship. The problem for Ruse is that, according to this view of objective values, a model which is responsible for ordering the way things are is given beyond what is observable and beyond nature. In contrary, Ruse believes that everything that explains the order of the world can be accounted for empirically. Given this dualistic understanding of objective values as referring to non-empirical objects, Ruse rejects the idea that values can be objective and accepts the only alternative he sees plausible: Kantian projectionism which successfully avoids reference to sources beyond nature.

For present purposes, it was necessary to link this view with dualistic understanding of objective values as Ruse's understanding of values and purpose will be analysed in more detail in chapter 5 and 6. Based on the outlined understanding of the relation between fact and value, it will be argued that an understanding of objective values does not require such a dualistic reference to god-like sources and a non-dualistic alternative will be proposed.

2.2.3.4.2 Pragmatist contesting of the dualistic interpretation

The dualistic interpretation of objective values, as outlined above, is a starting point also for Hilary Putnam (2002). In his discussion of objective values, Putnam argues against this view and offers an alternative. According to Putnam, objectivity in relation to values does not have to mean correspondence to description (i.e. objects) in a literal sense because objective values are not necessarily external to valuers. Moreover, Putnam argues that "right descriptions of the world" or "objectivity" is not something that has to refer to an absolute "frozen" truth that is "cast in concrete" ideal like 10 commandments. The author refers to this view, characteristic of Ruse's understanding of objective values, where "there is some final set of moral truths (or, for that matter, legal truths), all of which can be expressed in some fixed moral or legal vocabulary" (Putnam, 2002, S. 109) as "rampant Platonism". Putnam rejects the either-or view of dualism and accepts an interpretation of values as neither entirely subjective nor entirely objective.

The author begins his argument by showing that epistemic values, such as “correct”, “incorrect”, “true” or “false” are values that are not external to the valuer. They “enable us to correctly describe the world (or to describe it more correctly than any alternative set of epistemic values would lead us to do), that is something we see through the lenses of those very values. It does not mean that those values admit an “external” justification” (Putnam, 2002, S. 32 - 33). Putnam claims that such epistemic values do not refer to any external objects, but rather “are under rational control, governed by standards appropriate to their particular functions and contexts” (2002, S. 33). This is a good point because epistemic values, which are under control of the subject’s reason, are applied to reason-based judgements about values, such as objective values. Consequently, this shows that *formulating* objective values is certainly very much within the power of valuers.

Furthermore, Putnam also attacks the idea that “objective reality” does not exist. Although he does not make the link to objective values explicit, the apparent purpose of this is to argue that objective values are necessary because the reference to objective and “real” things in the world takes place. This opposes the idea that reality is only in the mind of subjects. According to Putnam, it was the position of Richard Rorty that “the notion of “objective reality” is empty since we cannot stand outside of our skins and compare our notions with (supposed) objective reality as it is “in itself”” (2002, S. 99). Putnam claims that “the idea of reality as it is “in itself” that is, as we would describe it if we knew the terms that describe its intrinsic nature, is apparently the only possible meaning that Rorty sees for the notion of “objective reality”. If the metaphysical sort of realism that posits “things in themselves” with an “intrinsic nature” makes no sense, then Rorty supposes, neither does the notion of objectivity” (2002, S. 99).

The quote suggests that Rorty’s problem that led him to reject objectivity is the very fact that there are no such objective values as 10 Commandments. Instead, *we* must strive to formulate the content of these objective values and it is not guaranteed that we are successful in doing it well. As formulating values is within the subject’s epistemological exercise who act according to their reasoning and follow their subjective attitudes, Rorty believes that values are distinctly subjective. Beyond this “subjective reality”, the best we can do is to try to understand subjective realities of others. However, we can never be sure of their subjective realities directly because their subjective states are within other subjects and are not accessible from outside. We only observe the manifestations of these subjective states. Thus, Rorty argues, “we should drop all talk of objectivity and talk of “solidarity” instead” (Putnam, 2002, S. 99).

Putnam agrees with some of Rorty’s observations that “that the metaphysical assumption that there is a fundamental dichotomy between “intrinsic” properties of things and “relational”

properties of things makes no sense", i.e. that there can be no absolute break between how things are and how things appear to us. However, he does not agree with the conclusion that we cannot know more than what appears to us: "the thoughts and experiences of my friends as just the intentional objects of beliefs that help me "cope,"". He continues, "If I did, what sense would I make to talk of "solidarity"? The very notion of solidarity requires commonsense realism about the objective existence of the people one is in "solidarity" with" (2002, S. 100). In other words, Putnam claims that even if one can only perceive its manifestation and does not have access to subjective states of others, this does not mean that objective reality does not exist. In fact, Putnam argues, unless we believe that objective reality exists or that our words can "represent things outside themselves", we cannot believe that what our friends perceive is real and this is a condition under which the concept of solidarity makes sense. Thus, it makes little sense to argue that there is no objective reality, if we wish to argue that we should take seriously other subjects.

Following this discussion, one should attempt to elaborate the link between subjective and objective character of reality and values. Reality is objective in the sense that we should not believe that it is different for different agents. The same applies to values: even though we formulate or embrace them individually, they are shared by agents because of certain ontological characteristics concerning facts, which are present in their content (as emphasised by other authors such as Foot (2001) or Woodfield (1976)) and are valid for all valuers (e.g. "No special explanation is needed of why men take reasonable care of their own future; an explanation is needed when they do not. Nor does human cooperation need a special explanation. Most people know that it is, for instance, unreasonable to take benefits and give nothing in return" (Foot, 2001, S. 22-23)).

Moreover, Putnam's answer to Rorty seems quite accurate as Rorty apparently confuses the two ways in which we can look at the relation of concepts (such as those between facts and values): the epistemological and ontological. Rorty's reasoning refers to the way we *understand* or *think about* values, but his conclusion wrongly makes the statement that values have no objective anchor in the real world. Putnam believes that objective reality exists; or at least, that it makes sense to believe so. He also considers that the epistemological aspect of valuing does not necessarily mean that values cannot be objective, universal or that they cannot refer to facts to a certain extent. Despite this, Putnam argues pragmatically, we should not focus on the theoretical questions about values, such as, whether they are universal and objective and what would be their ideal (if such an ideal exists). Instead, we should invest efforts into the quality of the methods we undertake to formulate them. Here, Putnam agrees with Rorty: we

cannot know objective values in any "self-evident" way, and we must take efforts to formulate and/or evaluate. For *practical* ethical purposes, it is less relevant to focus on theorizing about the ideal of these values. It is neither practical nor correct to understand objectivity as an ideal and it is not correct to argue that objective and universal values are not possible.

Indeed, Putnam is also explicit about his pragmatist motivations "if something is a good solution to a problematical human situation, then part of the very notion of its being a good solution is that human beings can recognize" that it is. We need not entertain the idea that something could be a good solution although human beings are in principle unable to recognize that it is. That sort of rampant Platonism is incoherent." (2002, S. 108 - 109). It is primarily for *practical purposes* that Putnam believes "rampant Platonism" does not make sense.

Paradoxically, here, it could be argued that Putnam blurs the line between epistemological and ontological statements himself. The philosopher's point is that there *is* no such thing as "frozen truth" (ontological statement) because it does not make sense to *conceive* of values as such (epistemological statement about how we think about and produce values). This is clearly an exaggeration present in his method. One could point out that the philosopher should not make statements about what *is* or *is not* from statements about *how to know about it* as much as one should not make the same conclusion in the other direction.

Still, Putnam's position is interesting because it counters established argumentation. It has a clear epistemological focus because it focuses on how values are produced, rather than on what they are as an *ideal*. He argues that it makes more sense to perceive the concepts of values and morality as they are in practice: dynamic and changing, because they are fallible. He claims that we explore, experiment, test and accept fallibility of our hypotheses with regards to morality and values and by inventing new concepts we formulate new truths (2002). This differentiation between ontological and epistemological approach to the problem is precisely why the author states that "there is no reason to suppose that one cannot be what is called a "moral realist" in meta-ethics, that is, hold that some "value judgments" are true as a matter of objective fact, without holding that moral facts are or can be recognition transcendent facts" (Putnam, 2002, S. 108 - 109). Values can exist objectively and refer to facts (although not as transcendent truths, as believed by Ruse). And yet, it is entirely within the exercise of the valuer to formulate them. In fact, this focus on the epistemological aspect of valuing is not very distinct from Kant's projectionism (with the exception that projectionism rejects the ontological character of values, which, in case of Putnam's position, is not clear given certain ambiguities). Putnam's only major shortcoming in argumentation is that from statements about the epistemological aspect of valuing, he derives statements about the ontology of values.

Putnam's conception of objective values refers to the epistemological exercise of formulating objective values, rather than to what objective values *are*. He refers to this as "warranted assertibility", which is a method aiming at the robustness of the methodology for formulating values. Warranted assertibility means that "we can apply standards of inquiry that we have learned from experience are necessary to the intelligent prosecution of inquiry in any area, and that, since we are never in the position of starting ex nihilo in ethics (…), there is no reason that it should be impossible to discover in individual problematical situations – however fallibly – that one putative resolution is superior to another" (2002, S. 106 - 107).

Given this understanding of objective values, Putnam claims that objectivity does not equal description in the dualistic sense. From the epistemological point of view, we are not passively *receiving* any description, such as a revelation by God, but we are actively reasoning seeking values with the help of our reason. While producing objective values, we are not describing but performing a normative exercise which includes reasoning. It is unlikely that Putnam did not consider reference to objects relevant. The author argues that valuing is a dynamic process that involves constant references to both internal and external elements, such as to facts, reasons or subjective states. While objective values do not *equal* reference to objects, or description, it would be contrary to Putnam's view to claim that it does not contain reference to objects. Putnam only seems to argue, in an anti-dualistic manner, that objective values cannot be explained entirely by reference to objects, not that reference to objects does not take place.

For Putnam, not only a reference to objects must be necessary, but also there must be an objective content of such values. The author also speaks about the possibility of evaluating values as *better* or *worse* "my own answer to the question, 'Are values made or discovered," is (…) that we make ways of dealing with problematical situations and we discover which ones are better and which worse" (2002, S. 97)). Values may not be fixed but they can be more or less appropriate given certain requirements which refer not only to epistemic values but also to facts, thus, certain ontological characteristics. These points about pragmatist and non-dualistic interpretation of objective values will be revisited in chapter 6, where an interpretation of objective values will be offered.

Consideration of Putnam's position is another context in which one can highlight the difference between how we *formulate* values and what characterises the concept of a value and what values are in terms of their content, i.e. what are the ontological characteristics of values. The former is an epistemological process characterised by a rich and dynamic process that involves reasoning and referring to facts and internal subjective states. In this process, different types of statements, such as values, reasons and facts, are relevant. Indeed, while it also involves

references to facts, the point is that such references are made by an agent and are actualised by an agent. This dual understanding of values in a non-dualistic way helps to accommodate the roles of subject's valuing, our epistemological inquiry about values, as well as the objective nature of values and the fact that values refer to objects.

2.3 Conclusion

The discussion of issues surrounding the subjective and objective aspects of values is very relevant to understanding the relation of facts and values. The reason for this is the fact that the concept of subjective and objective values concerns values' relation to facts. In line with this, the established chain of dualisms links dualism between subject and object with a dualism between fact and value. This imposes a skewed and an inaccurate dualistic interpretation of values' relation to facts in the understanding of values as subjective and objective. This is observable across different contexts and discussions that revolve around understanding of values as subjective and objective.

Dualism is an extreme interpretation that blurs relations between two concepts and leads to distorted interpretations of these concepts to the extent that they cannot be captured with a satisfactory accuracy. Both ideas of values as subjective and objective capture important aspects about values. However, they are not, as dualisms suggests, mutually exclusive but complementary as both subjective and objective views capture important issues but in isolation are insufficient to explain valuing entirely. The subjective view highlights the epistemological aspect of the act of valuing: the fact that formulating values is dependent on the exercise of a valuing agent. However, its dualistic emphasis on subjective states as justification for values and norms is arbitrary and obscure because it does not acknowledge that values also contain references to reasons and objects. The objective view highlights the fact that such values contain references to objects external to valuers, and to reasons (are justified by reasons). Thus, it may explain certain ontological characteristics about values. Their rational justification explains the objective and universal character of such values. Despite this external (relative to the subject) link to objects in values, such references to facts and reasons are *actualised* by the agent in their act of valuing. Indeed, the challenge in capturing values is to find an appropriate approach to reconciling the reference to objects, rationality and the autonomous decision-making of the valuers, thereby also addressing the problem of deriving norms from facts.

The idea of a differentiation between epistemological and ontological understanding of the relation of fact and value was instilled in the discussion. On the one hand, highlighting the subjective view's focus on the act of an agent is related to the epistemological understanding

of fact and value. On the other hand, arguing for value' relation to objects, facts and relevance of reasons alludes to the ontological understanding because it explores the relation between fact and value that may explain values' reference to facts. The next three chapters will focus on elaborating on this approach. Based on this, chapter 6, the final chapter, will return to the interpretation of values as subjective and objective based on the presented approach to the fact-value relation in order to address possible remaining doubts.

Moreover, the discussion of issues above has resulted in several other points which are of importance and will be returned to in later chapters. As visible in Kant's position (2012), despite the importance of the fact that valuing is an act of an agent, the idea of objective values is indispensable. Objective values are not only possible, but they also should be embraced because they are the very core of morality. The discussions have shown that objective values are values that are reasoned about and justified and yet they are embraced by valuers even to the extent that valuers can attach them to their subjective states. Objective values, as Putnam (2001) skilfully shows, require employment of sound reasoning of high epistemological quality about what should be done. His arguments show that within the process of evaluation, subjects refer to their subjective states as much as they refer to facts and reasons. And yet, objective values should not be understood as "cast in concrete" (Putnam, 2002) set of moral norms. At the same time, while we recognize that valuing consists in the exercise of a valuer that contains references to facts and reasons, we cannot deny that values have some sort of ontological character (due to references to facts, things outside of the object, such as shared human nature). The understanding of how values contain references to facts and what this means for valuing as an epistemological exercise requires further elaboration which will be provided in chapters 4, 5 and 6. Chapter 4 will outline the ontological understanding of the fact-value relation thereby exploring the manifestations of (4.2) and the reason why (4.6) references to nature happen. Chapter 5 will provide an application of the developed approach, primarily in chapters 3 and 4, to the fact-value relation in the context of purpose. Chapter 6 will conclude what the approach implies for understanding of values references to facts, in the context of understanding values as subjective and objective thereby explicitly returning to the questions raised in chapter 2. The elaboration of this phenomenon in these chapters will attempt to maintain the balance in understanding valuing as an autonomous act of a valuer and the phenomenon of why we tend to, as differentiated from why we should, make references to facts. Indeed, these two aspects correspond to epistemological and ontological understandings of the (biological) fact-value relation.

3 The epistemological perspective: the is-ought problem and agents' reasoning with involvement of biological facts

In order to develop the approach to understanding the relation between facts and values, one must tackle an important bottleneck: the is-ought problem. The fact-value dualism and the dualistic understanding of the is-ought problem, otherwise known as the is-ought fallacy, mutually reinforce each other as they refer to the same problem but with a slightly different focus. Referring to the is-ought problem, many philosophers (e.g. Fuller (1958) or Searle (1964)) refer to the relation of fact and value, and vice versa. In other words, the problem of the relation of fact and value is often understood *as* the problem of the relation of *is* and *ought*.

Before elaborating on what the fallacy refers to: how it *has been* understood historically (section 3.2) and how it *should be* understood based on an analysis of examples of derivation of norms and drawing respective conclusions (3.3), the attempt is undertaken in the section 3.1 to delineate the issue of the fact-value and the is-ought problem. It is very useful to have at least a vague understanding about how these two problems should be understood in relation to each other. Moreover, this discussion of the relevance of the is-ought problem to understanding the fact-value relation shall elucidate why the is-ought problem concerns the epistemological understanding of the fact-value relation. However, without a discussion about how the is-ought fallacy should actually be understood, this outline can be done only in a general and a preliminary manner. The interrelations and questions about issues with regards to the perception of this relation can be outlined. Until the appropriate understanding of is-ought problem is developed, one can only work with the general and very vague understanding of the is-ought fallacy. This would be the thesis that "an *ought* cannot be derived from an *is*", meaning that a norm (such as a moral norm) cannot be derived from a fact.

3.1 The relation of the fact-value and is-ought problems

In his article on "How to Derive "Ought" from "Is" (1964), John Searle refers to the is-ought problem in terms of the fact-value terminology. Searle states that "It is often said that one cannot derive an "ought" from an "is." This thesis, which comes from a famous passage in Hume's Treatise, while not as clear as it might be, is at least clear in broad outline: there is a class of statements of fact which is logically distinct from a class of statements of value. No set of statements of fact by themselves entails any statement of value. Put in more contemporary terminology, no set of descriptive statements can entail an evaluative statement without the

addition of at least one evaluative premise. To believe otherwise is to commit what has been called the naturalistic fallacy." (1964, S. 43)

Searle equates "statements of fact" and "descriptive statements" with "is" and "statements of value" or "evaluative statements" with "ought". One possible reason why fact-value and is-ought relations are often equated is because both sides of the (often understood as dualistic) hyphen are related to each other. Facts, or descriptions, are statements of what *is*. While it may be deceptively easy to state that descriptive statements are simple, there are no significant differences between the different terms that are used for referring to them. Even the term "descriptive statement", which is not exactly the same as "fact", can be understood as referring to facts because all facts describe something. However, are *oughts* the same as values? This question was considered in the previous chapter and requires an address in the present chapter as well. *Oughts*, stand for prescriptive normative statements, or norms in a prescriptive formulation. *Oughts* necessarily contain values but are not the same as values[20].

As was mentioned previously, values are fundamental components of norms. Values denote *goods*, such as life, while norms formulate statements about these goods in a context of further circumstances such as other goods. They can be more general, such as "it is good to protect life", or more specific, for example, "it is good to protect life of all human beings irrespective of their origin". As such, norms capture statements referring to these goods in certain circumstances and are appropriate in guiding action with regards to such different circumstances. Prescriptive formulations can be derived from normative statements. Such formulations of norms contain "oughts", or in a more popular language, "shoulds"; for example, "we should protect life (of all human beings irrespective of their origin)". So, values and norms are linked by the value; however, norms are elaborations of circumstances and contexts about these values in relation to how to pursue these goods. At the same time, it is true that formulations of some values and norms are the same (e.g. "life is good").

Due this close relation, necessary presence of a value in a norm and the fact that formulations of norms sometimes correspond to formulations of values, equating *oughts* with values, normative statements with evaluative statements, is usually proximately understood. It even is a common practice among philosophers. Except for the close relation between value and norm, it is true that, just as a norm is derived from a fact, so can a value be derived from a fact when

[20] In the following, the term «ought» will be used interchangeably with «norm», «is» with «fact».

we *reason about* values, in order to know what is valuable. Thus, a formulation of an is-ought problem in terms of a fact-value problem, as is done by Searle but also other such as Finnis (1980), is possible. Another possible reason for why equating both concepts is so widespread is the idea that dualism applies to both. As framed by Searle (1964), an *ought* is necessarily separated from an *is* and facts are necessarily separated from values, according to the dualistic interpretation.

The relationship between value and norm is very important (see also 2.1.2) and for this reason the differentiation between the two concepts is often perceived as negligible. However, in certain circumstances, this differentiation can be more pronounced and useful, as will be discussed further. To a certain extent, the same applies to the differentiation between is-ought and fact-value problem. It is difficult to draw a clear line between these two sets of issues and their differentiation, or the usefulness of this differentiation, is often fluid and depends on circumstances. In short, however, it could be said that fact-value is a more metaphysical problem. In contrast, since the is-ought problem highlights the concept of a norm (*ought*), rather than value, it clearly relates to the epistemological exercises of reasoning and formulating norms. At the same time, given the close relation of value and norm, the is-ought issue is an epistemological perspective on the fact-value relation because it refers to the normative (epistemological) exercise of reasoning with involvement of facts and related values.

Thus, as the is-ought problem concerns reasoning that leads to formulating and producing norms, it is argued that the is-ought problem is an epistemological problem and concerns the epistemological perspective of the fact-value problem. The general and vague statement attributed to the "is-ought fallacy" about such processes of reasoning is that derivations of norms (or values, or both) from statements of fact are not valid (or not justified – the appropriate interpretation to be explored in 3.3). As section 3.3, more specifically 3.3.1, will show, this is linked with the logical delineation between facts, values and norms given that each type of statement has a different function in reasoning[21].

Understood dualistically, the is-ought fallacy suggests that a move from a fact to a norm is *never* and *under no circumstances* possible because dualism is an absolute statement and it has been understood to apply to both is-ought and fact-value. Dualism does not grant the possibility

[21] The difference between understanding something as "epistemological" to understanding it as "logical" is that "logical" refers to overall characteristics of a concept while "epistemological" refers only to its specific elements, namely, those relevant to the processes of formulating the contents or reasoning.

that concepts can be connected in one way but not in another. However, differentiating ways of understanding this relation, equips one with more flexibility in analysing the different ways in which fact, value and norm can be separated and related. It should be possible to say that fact and value (and norm) are separated from the epistemological point of view – in the sense that one cannot derive a value or a norm from a fact (without a justification, as will be added later) – while being able to state that values and facts are ontologically connected because values refer to facts (both types of statements are yet to be elaborated). Dualism blurs this differentiation and is a considerable exaggeration.

Understanding the fact-value relation *in terms of the is-ought problem* means investigating the epistemological problem linked to the fact and value problem, as to whether and how norms are derived from facts. At the same time, it should be noted that it is a different discussion than the discussion about the ontological relation of fact and value. This widely accepted exaggeration is evident in authors such as Putnam or John Searle. Searle refers to the is-ought thesis as a thesis according to which "no set of statements of fact by themselves entails any statement of value. Put in more contemporary terminology, no set of descriptive statements can entail an evaluative statement without the addition of at least one evaluative premise" (1964, S. 43). On the other hand, in his work regarding the relation of fact and value, Putnam refers to the epistemological is-ought thesis as dualism, claiming that the is-ought fallacy is a "Humean dichotomy-the one implicit in Hume's famous doctrine that one cannot infer an "ought" from an "is"" (2002, S. 14). In Putnam's terminology dichotomy is a dualism. However, by referring to it as dualism, the author blurs its epistemological character and promotes the idea that it is a thesis of *absolute* lack of relations between the concepts, where the differentiation between epistemological and ontological levels of understanding the fact-value relation is not made.

3.2 The is-ought problem in the historical context

The is-ought problem pertaining to the way we perceive the fact-value relation is said to have been formulated by David Hume (2011). The precise quote that is associated with it is the following:

"In every system of morality, which I have hitherto met with, I have always remarked, that the author proceeds for some time in the ordinary way of reasoning, and establishes the being of a God, or makes observations concerning human affairs; when of a sudden I am surprised to find, that instead of the usual copulations of propositions, is, and is not, I meet with no proposition

that is not connected with an ought, or an ought not. This change is imperceptible; but is, however, of the last consequence." Hume continues that "For as this ought, or ought not, expresses some new relation or affirmation, 'tis necessary that it should be observed and explained; and at the same time that a reason should be given, for what seems altogether inconceivable, how this new relation can be a deduction from others, which are entirely different from it. But as authors do not commonly use this precaution, I shall presume to recommend it to the readers; and am persuaded, that this small attention would subvert all the vulgar systems of morality, and let us see, that the distinction of vice and virtue is not founded merely on the relations of objects, nor is perceived by reason" (Hume, 2011, S. 198).

Given the influence of this remark, there has been a significant number of interpretations of this statement. First of all, it is quite clear that the statement is made in passing and Hume does not seem to explicitly refer to any specific issue other than what is apparent in the quoted passage itself. Some readers take it as a stand-alone assertion that does not need substantial knowledge of Hume's philosophy or any possible intentions than those apparent. Many others seek such intentions and interpret this passage in different contexts, such as in the preceding discussions in the "Treatise of Human Nature" (Hume, 2011) as discussed by Finnis (1980), Hume's metaphysics (Putnam, 2002) or other positions and general assumptions of his philosophy.

Indeed, the interpretations are so diverse and explore various interlinkages that analysing the quote in this manner can easily make a book and requires a comprehensive knowledge of Hume's philosophy and his times. However, it is worth pointing out that this is a contentious exercise as there is no common understanding for exact reasons behind Hume's observation, as there is no common understanding behind its interpretation. Just like Searle ("while not as clear as it might be, is at least clear in broad outline" (1964, S. 43)), also Putnam finds the reasons behind this observation is unclear and contested: "although Hume's claim that one cannot infer an "ought" from an "is" is widely accepted (sometimes this is called "Hume's Law"), the reasons that Hume gave in support of it are by no means accepted by those who cite Hume so approvingly"" (2002, S. 14). This adds to the difficulty of having a clear understanding of the is-ought thesis which is perceived to be derived from Hume's observation.

The passage offers the opportunity of interpreting it without the need of seeking any further hidden meanings as there is no clear indication by Hume that he refers to a different issue. Moreover, since there is no consensus on interpreting it in the light of another issue, this

opportunity will be exploited for present purposes. However, alternative interpretations by authors who have been discussed throughout this work will be addressed in order to provide a contrast and justification to this approach. In addition, it could be argued that it is unlikely that any further interpretation that would seek beyond what is explicitly addressed by the passage would radically change its meaning. Finally, there is always the danger that in seeking hidden meanings, one may actually lose track of the immediate point which is being asserted.

Turning to the interpretation of the is-ought passage itself, the important question to address in this section is whether the point emphasized by Hume has correctly become associated with the dualistic idea that an *ought*, a norm, can *never* be derived from an *is*, a fact. In contrast, further sections will explore what is reasonable to hold about this relation, irrespective of interpretations of Hume's infamous statement. The questions here are: does Hume's statement correspond to the formulation of the allegedly same problem captured by Searle that "no set of statements of fact by themselves entails any statement of value. Put in more contemporary terminology, no set of descriptive statements can entail an evaluative statement without the addition of at least one evaluative premise" (1964, S. 43)? Does Hume introduce a dualism between *is* and *ought*, translated into dualism between fact and value, as Putnam claims that this is "Humean dichotomy-the one implicit in Hume's famous doctrine that one cannot infer an "ought" from an "is"" (2002, S. 14)? In other words, is what Hume suggests a dichotomy, or dualism, suggesting that facts and norms are so radically different, that a norm can never and under no circumstances be in any way connected to a fact, i.e. be derived from it ? And if not, how is the is-ought problem to be understood? Attention should be paid to the fact that different kinds of characterizations ("different" and "not connected") are equated here as meaning one and the very same; to be different means that concepts cannot be connected.

Looking at Hume's problem in the above quote (2011) as a stand-alone quote, invites the impression that the statement is highly important but not unexpected. It also does not assert dualism. The most important observation is that Hume emphasizes the *difference* (not necessarily a *dualism*) between an *is*-statement and an *ought*-statement which means that one cannot follow the other *without any further explanation* – not that this cannot be ever possible. He claims that *ought* or *ought not* is a "*new* relation or affirmation" and that this is not the same as "the usual copulations of propositions, is, and is not", which is why he is surprised to find them "imperceptibly" appearing *without an explanation* as if it was logically following an *is*-statement without any further connecting statement that explains their relation.

Thus, Hume points out that a statement of a norm should not follow a statement of a fact without any explanations, such as other connecting statements that explain their relation. Since an *ought*-statement is a new statement, it is "necessary that it should be observed and *explained*": "reason should be given (…) how this new relation can be a deduction from others, which are entirely different from it". Looking at this quote, clearly the problem is that a statement of a norm is a logically different from a statement of a fact and one cannot directly result from the other as a new affirmation. It is clear that Hume finds this problematic as he speaks of "how this new relation can be a deduction from others, which are entirely different from it". Hume points out the conditions of deriving a norm from a fact, namely that there must be an appropriate explanation (by a connecting statement). Hume does not claim that such derivations are never and under no circumstances possible.

It possible to entirely follow Hume in his reasoning. It seems illogical to conclude what *should* be from a statement of a fact *alone*. *Is*-statements are different from *ought*-statements, they have different functions. *Ought*-statements are normative statements that indicate what should be done, they can prescribe conduct. Therefore, in any context, but particularly in the moral context, they should be justified by reasons and arguments so that morality, which necessarily requires reason, can effectively serve its purpose. *Is*-statements are statements of a descriptive character. Their character is very different from normative statements and they do not have any normative or moral implications which are clearly evident *without further statements that would justify them*. This differentiation is an important one and it should indeed be recognized as an important feature of the is-ought problem, as discussed further.

Thus, what Hume (2011) points towards is a logical differentiation that *is*-statements are different from *ought*-statements and cannot be, without appropriate reasons captured in connecting statements, derived one from the other. This difference in function, role and character in reasoning is a logical difference that pertains to the very nature of these *types of statements* that they are. As a logical difference, it applies to the manner of reasoning and formulation of norms (and as it concerns reasoning, it also has an epistemological character). According to this interpretation, the is-ought thesis can be understood as an epistemological principle based on a logical differentiation of factual and normative statements. It highlights the fallacy of unjustified derivations of norms from facts. As noted before, such observation does not seem particularly ground-breaking, although it is very likely that we owe this awareness to Hume.

Hume cautions that unjustified is-ought derivations are often imperceptible. While the philosopher objects against unjustified deduction of an *ought* from an *is*, nothing in this quote indicates that such move, whenever justified or explained, cannot be made. Nothing in this quote implies dualism between *is* and *ought* or fact and value. The point made by the is-ought problem, understood in the "standard" manner as a warning against *unjustified* is-ought derivations, will be scrutinized in the rest of this chapter. Before turning to this, two sections should be committed to defending the "standard" interpretation of Hume.

3.2.1 Discussion of the proposed "standard" interpretation

The above is a "standard" (Finnis, 1980) interpretation of Hume's famous passage as a stand-alone statement. Although it may be standard, or simple compared to others, it has very important implications and it should not be discarded as trivial. In fact, even this standard interpretation requires clarifications and is linked to misunderstandings, such as the idea that one should *never* and under no conditions derive a norm from a fact. However, philosophers often enquire into the background of Hume's observation much more and put this quote in a wider context of Hume's philosophy. It is interesting to explore some elements of the context of Hume's quote in order to ensure that there is nothing against the interpretation proposed above.

In the last lines of the "is-ought passage" (2011), the author claims that his observation will help see that "the distinction of vice and virtue is not founded merely on the relations of objects, nor is perceived by reason". Hume refers to the distinction between vice and virtue as moral judgements on which moral norms are based. In chapter 2 it was argued, as would seem quite uncontroversial to state, that such moral norms require reasoning for provision of appropriate justifications. As they require reasoning, they cannot be straightforwardly, without any further reasons, derived from facts. Or in other words, they cannot be related to objects (facts, descriptions). However, according to Hume's quote, a justification is not attributed to reason either, or at least not to reason alone ("nor is perceived by reason"). Thus, the question to explore in the discussion of the proposed approach is: how should this be understood, and does it speak against the proposed "standard" interpretation of the quote?

Hume's standpoint on the role of reason in morality is indeed peculiar and not entirely coherent (Finnis, 1980). However, it will be argued that it does not contradict the "standard" interpretation advocated here. Although it seems that the last sentence contradicts this by suggesting that moral judgements relate to sentiments, not reason, all in all it can be reconciled

with the idea that formulation of (moral) norms involves reasoning, or objective evaluation, in order to offer justifications for deriving norms from facts.

In discussions prior to the quote above, Hume states "take any action allowed to be vicious: Wilful murder, for instance. Examine it in all lights, and see if you can find that matter of fact, or real existence, which you call vice. In which-ever way you take it, you find only certain passions, motives, volitions and thoughts. There is no other matter of fact in the case. The vice entirely escapes you, as long as you consider the object. You never can find it, till you turn your reflection into your own breast, and find a sentiment of disapprobation, which arises in you, towards this action. Here is a matter of fact; but it is the object of feeling, not of reason. It lies in yourself, not in the object" (2011, S. 198). The idea behind this thought, characteristic of Hume's moral philosophy, is that moral judgements are to a certain extent motivated by sentiments, such as those of disapprobation, which arise in our "own breast". In other words, Hume emphasises the role of subjective states of a subject.

Callicott (2008) provides the following explanation of this position: "Good and evil are not, as we should say today, objective qualities; they are, in Hume's terms, neither "matters of fact" nor "real relations" among objects. We find them rather in our "own breast"; they are feelings of approbation or disapprobation, war approval or repugnance, which spontaneously arise in us upon the contemplation of some action or object" (2008). Questions of vice and virtue, good or bad, as will be argued, are *not only* motivated by reason but they are also subjective sentiments. Hume asserts that vice or virtue are subjective sentiments, they are not the same kinds of statements as "being an apple" is. The statement of being an apple, just like objective judgements that necessarily involve reason, has objective qualities, independent of subjective perspective. However, judgements of vice or virtue are also based on the subjective evaluation. At least, we certainly embrace them subjectively, whether we are convinced by reason or not. As such, they are neither, at least fully, "matters of fact" nor "objective qualities", as Callicott states. Hume's emphasis on this is for purposes of arguing for the importance of passions (such as those subjective states of a subject) against the widely emphasized role of reason. Hume points out that emotions and "passions" in subjective valuing, lead to embracing a value and motivate normative behaviour.

In spite of this emphasis on subjective valuing, Hume's position cannot be understood as suggesting that *only* subjective sentiments can lead to formulation of moral norms (and values). While one must acknowledge that Hume does emphasise the importance of subjective valuing,

indeed he is widely known for this, it is also evident, based on other quotes, that Hume considers reason to have an important and a necessary role in such value judgements. To use the terminology applied here, it will be argued that Hume emphasises both subjective and objective aspects of valuing, where objective evaluation refers to employment of reason with regards to evaluation of values and norms. Moreover, the appropriateness of this interpretation becomes clearer once the differentiation between the descriptive and normative understanding of statements is applied. Hume may be stating that we *tend* to be guided by subjective sentiments and not reasons without implying that this is how we *should* conduct value judgements (evaluations) and formulate norms.

So, where does Hume see the role of reason? Indeed, many note (e.g. Callicott (2008) or Finnis (1980)) that his position on the interplay of reason and sentiments is rather incoherent. This is because despite his emphasis on subjective states, in other quotes, Hume indeed considers reason to be a necessary part of formulating norms. The author does not clearly account for how the two stand in a relation to each other. Hume states "(…) reason, in a strict and philosophical sense, can have influence on our conduct only after two ways: Either when it excites a passion by informing us of the existence of something which is a proper object of it; or when it discovers the connexion of causes and effects, so as to afford us means of exerting any passion" (2011, S. 193). Although not very precise, Hume is at least clear that passions or sentiments are never, and should never be, the only decisive factors about what *ought to* be done but should be supplemented by reason. On subsequent pages, Hume explains why incest is "criminal" for humans but not for animals by reference to the reasoning capacity: humans are endowed with reason which helps us distinguish "turpitudes". This is view about reason being distinct and crucial for human beings is a view clearly shared with Kant (see 2.2.2.3).

Indeed, Hume seemed to have believed that reason can help us *discover* morality: "All the difference is, that our superior reason may serve to *discover* the vice or virtue, and by that means may *augment* the blame or praise: But still this discovery supposes a separate being in these moral distinctions, and a being, which depends only on the will and appetite, and which, both in thought and reality, may be distinguished from the reason. Animals are susceptible of the same relations, with respect to each other, as the human species, and therefore would also be susceptible of the same morality, if the essence of morality consisted in these relations. Their want of a sufficient degree of reason may hinder them from perceiving the duties and obligations of morality, but can never hinder these duties from existing; since they must

antecedently exist, in order to their being perceived. Reason must find them and can never produce them. This argument deserves to be weighed, as being, in my opinion, entirely decisive" (2011, S. 198)[22]. This position is distinctly interesting. Hume argues here, very much in line with evolutionists such as Ruse (2017), that there is "antecedent morality" which exists by means of us being natural beings and having shared nature. This position also shares Kant's view that some values (or sentiments) are universal because they are natural for humans (see 2.2.3.3). So, as Callicott states, Hume's theory is neither "abjectly relativistic" nor "abjectly sceptical": "the moral sentiments are both *natural* and *universally distributed* among human beings (…). In other words, like physical features – the placement of the eyes in the head, two arms, two legs, an opposed thumb, etc – the moral sentiments are only slightly variable psychological features common to all people" (2008)[23].

With regards to the shared, universal nature that gives rise to similar and generally shared sentiments and moral value and norm conceptions, Hume suggests that reason *finds* these moral sentiments *among sentiments which humans (tend to) have*. It helps us discover the difference between vice and virtue, thereby "augmenting" moral judgements. As such, it *should* be used in moral judgements. In the light of his emphasis on the role of sentiments in moral judgements, Hume's observations about reason may be understood to have a normative character, pleading for the use of reason against being directed by sentiments alone (as we *tend* to be). Hume's emphasis on the fact that "superior reason *may* serve to discover vice or virtue" suggests that he possibly distinguishes between what *is* the case and what *should* be the case. In other words, reason may be absent from our judgements which are entirely defined by our sentiments and passions. However, it should be employed as it has an important role in helping us distinguish what should be done from what should not be done in order to formulate sound norms.

This shows that Hume does see the role of reason as important in moral judgements and he does believe its use *should be* promoted in normative exercises. Hume promotes objective evaluations which employ reason to help us find the good way because, as makes sense to understand, we often make moral judgements based on our subjective states which are not necessarily rational. From the descriptive point of view, valuing may be more or less rational

[22] Emphasis added.

[23] it is, therefore, interesting to observe that despite Hume's belief in universal nature shared by human beings, from which sentiments and shared perception of morality and moral *oughts* originates, his statement about *ises* and *oughts* has become to be perceived as an argument against theories that recognize any relevance of nature to morality

(as law can be more or less moral). After all, in practice, emotions and sentiments have a role in valuing which sometimes leads us to undermine rational choices. However, they also have a role in helping us embrace reasons. Still, from the normative point of view, valuing should be rational (as law should be moral). rationality is important and should be promoted. Just because we have a certain sentiment, let us say anger, does not mean that it is rational or that it is rational to be guided by it in our normative formulations of what should be done. It would be bizarre to assign such a view which amounts to an is-ought fallacy to Hume. As was noted in chapter 2, 2.2.2, Hume did consider reason, and thus objective evaluation, a valuable supplement to subjective formulation of values.

One more issue remains to be addressed in relation to the last paragraph. Above, the understanding of fact was applied to the fact of *having* a sentiment, However, Hume also states that such sentiments are not "matters of fact". Hume asserts that "the distinction of vice and virtue is not founded merely on the relations of objects, nor is perceived by reason" (2011, S. 198 - 199). The formulation of the content of a sentiment that is not a matter of fact but depends on a subjective perspective (or subjective valuing, to use the same terms as before). The definition of the content of a sentiment does not come about in the same way as a definition of the content of a statement that something is an apple. However, even if the definition of a content of a sentiment is not like the definition of a content of a matter of fact, the *presence* of that sentiment, and especially its universal presence natural to beings of our species, is *a fact*. Some such sentiments appear without being mediated by reason, for example, by virtue of being biologically predisposed to them. If we accept that such predispositions originate in our nature, they can certainly be understood as natural occurrences which are nothing else than biological facts. This means that deriving an ought without justification from a *presence* of such a sentiment which is a biological fact, may still be an unjustified is-ought derivation. At this point, it can only be reiterated that Hume's emphasis on passions not being matters of fact was made, in the first place, with reference to the purpose of the chapter which was to emphasize the role of passions against the role of reason.

To sum up, it is very unlikely that Hume promoted the idea that reason is not necessary for formulation of moral norms. What does this mean for interpreting the is-ought fallacy? Certainly, this is an important point for the "standard" interpretation which suggests that Hume *promoted* the use of rationality in moral reasoning that leads to formulation of moral norms At the same time, the philosopher acknowledged the central role of subjective states in how we

tend to value. Among these subjective tendencies, it is reason that helps discover what is rational. Despite the remark on reason that is present at the end of the "is-ought passage" (2011), Hume was indeed promoting use of reason with regards to subjective states as convincing us to value what is rational, similarly to Kant (see 2.2.2.3).

3.2.2 Discussion of some alternative interpretations of the passage

The interpretation of the "is-ought passage" can be made even more complex. Putnam (2002) adds more depth and background behind different interpretations of Hume, demonstrating that there are far-reaching discussions involving "a substantial metaphysics" with regards to Hume's statement. The philosopher suggests that there is "One clue that the claim presupposes a substantial metaphysics (as opposed to being a simple logical point) is that no one, including Hume himself, ever takes it as merely a claim about the validity of certain forms of inference, analogous to the claim "you cannot infer 'p&q' from 'p or q.'" Indeed, if the claim were simply one about the form of certain inferences, it would prohibit one from ever inferring "you ought to do x in such-and-such circumstances" from "for you to do x in such-and-such circumstances is good, and for you to refrain from doing x in those circumstances is bad."" (Putnam, 2002, S. 14).

The questions to ask now are: is it true that "if the claim were simply one about the form of certain inferences" or a "simple logical point" it would prohibit "*ever* inferring" what one ought to do in certain circumstances from specification of whether doing something in certain circumstances is good and refraining from doing something in certain circumstances is bad? If one would wish to argue with Putnam and object that Hume's statement is indeed plain and does not involve any background metaphysics, one could state that, first and foremost, at least in the quote above, Hume does not talk about *never* being able to infer anything from anything. One could claim that it already is an overinterpretation of Hume to suggest that his statement is an absolute prohibition of ever deriving a norm from a fact in every and any possible case and under every and any circumstance. Is it an accurate formulation that "what Hume meant was that when an "is" judgment describes a "matter of fact," then *no* "ought" judgment can be derived from it." (Putnam, 2002, S. 14)[24] ? Or that there is an (unconditional) "underivability of "oughts" from "ises""? In other words, did Hume really mean that absolutely no *ought*-judgement can ever be derived from an *is*-statement under no condition? Did he ever speak of this principle in absolute terms about "underivability" as in, "an ought can never be inferred

[24] Emphasis added.

from an is" which would imply the there are no reasons that would justify such a move? One could argue that Putnam conflates an epistemological problem about reasoning that involves facts and norms, with a metaphysical issue about the relations of facts, values and norms. In the is-ought passage, Hume seems to be concerned with an epistemological issue: a correct form of reasoning, rather than a metaphysical explanation of the relation between facts, values and norms.

Nevertheless, Putnam is a skilled philosopher, and one cannot simply assume that he "overinterpreted" Hume or does not distinguish between epistemological and ontological issues. The question is, then, what is the reason for Putnam's conviction that "a substantial metaphysics" is involved and why does the philosopher derive from this a dualistic interpretation? For Putnam, it is Hume's emphasis on moral judgements not being matters of fact that contributes to interpreting his observation about the reasoning from *is* to *ought* as referring to metaphysics. Putnam's claim is that Hume "assumed a metaphysical dichotomy between "matters of fact" and "relation of ideas"" and "what Hume meant was that when an "is" judgement describes "a matter of fact," then no "ought" judgement can be derived from it" (2002, S. 14) and he emphasizes that "Hume's metaphysics of "matters of fact" constitutes the whole ground of the alleged underivability of "oughts" from "ises."" (2002, S. 14 - 15). Putnam is correct that the question about the nature of these different kinds of statements, which nonetheless refer to the manner in which we reason (thus also have epistemological character), is of metaphysical character. However, it is unclear why the author maintains that there is a *dichotomy* between them.

Putnam states that: "*given that "passions"* or *"sentiments" were the only remaining properties of "ideas," Hume thought he had at his disposal to explain why it so much as seems to us that there are such matters of fact,* it was quite reasonable for him to conclude that the components of our "ideas" that correspond to judgments of virtue and vice are nothing more than "sentiments" aroused in us by the "contemplation" of the relevant actions owing to "the particular structure and fabric" of our minds." (2002, S. 15). Hume indeed *distinguishes* the two categories in his other work, "An Enquiry Concerning Human Understanding" (1902). The quote is as follows: "All objects of human reason or enquiry may naturally be divided into two kinds, to wit, *Relations of Ideas*, and *Matters of Fact*" (Hume, 1902). The former "are discoverable by the mere operation of thought, without dependence on what is anywhere existent in the universe" (Hume, 1902). Such truths are justified a priori as they are constituted

by concepts. Values and norms seem to qualify into this category; they are unlike matters of fact which relate to facts discovered by experience.

Putnam continues to explain the "metaphysical dichotomy" by referring to concepts of "pictorial semantics". "Ideas", according to Hume, could only represent matters of fact by resembling them; "ideas" could also "involve or be associated with *sentiments*" (2002, S. 15), which are their non-pictorial features. He then proceeds to state that "if there were matters of fact about virtue and vice, then it would have to be the case (if we assume "pictorial semantics") that the property of virtue would be *picturable* in the way that the property of being an apple is picturable. Hume was quite correct, *given his semantical views*, to conclude that there are no such matters of fact" (Putnam, 2002, S. 15). This logical *difference* between the two types of statements is largely accepted as relevant to the is-ought problem. Indeed, it is an important logical distinction that has epistemological consequences irrespective of what metaphysical views one holds about these concepts. Putnam, however, attaches a metaphysical explanation to this problem.

Putnam emphasises this metaphysical interpretation of the problem as opposed to understanding Hume's statement as having only epistemological nature: "Hume does not just tell us that one cannot infer an "ought" from an "is" he claims, more broadly that there is no "matter of fact" about right and no matter of fact about virtue" (2002, S. 15). Putnam takes the latter metaphysical statement ("that there is no "matter of fact" about right and no matter of fact about virtue") to be including or implying the earlier epistemological statement ("that one cannot infer an "ought" from an "is""). As such, the metaphysical explanation is treated as superior to the epistemological one and, in Putnam's understanding, the epistemological is-ought problem results from Hume's metaphysics. However, it can be objected, once again, that Hume's "is-ought passage" (2011) asserts an epistemological point about how one should reason. While a metaphysical interpretation can be *attached to it*, it does not suggest a metaphysical dualism but a *difference*. Similarly, in this case, it should not necessarily be assumed that a metaphysical interpretation has primacy over the epistemological one.

The question whether the problem, as presented by Putnam, is of epistemological or metaphysical (in Putnam's understanding) nature is indeed difficult to answer. It is also evident in Finnis' account of Hume's passage: "The first and standard interpretation treats Hume as announcing the logical truth, widely emphasized since the later part of the nineteenth century, that no set of non-moral (or, more generally, non-evaluative) premisses can entail a moral (or

evaluative) conclusion." (1980, S. 37). This idea to which Putnam refers to as a metaphysical explanation, for Finnis is a "logical truth". It is interesting to note that two issues are being equated here: the idea of *deriving* a norm from a fact and the question about what normative and/or evaluative as well as factual (or non-evaluative) statements *are* and what they contain *in terms of characteristics as different types of statements*. The former is clearly of epistemological nature, while the second has also somewhat metaphysical nature even though it still refers to logical nature and epistemological consequences. However, while this focus refers to what characterises concepts, the inquiry into the nature of concepts is done not with regards to their *contents* but with regards to them as *types of statements* and their function in reasoning and production of normative conclusions. Even though sometimes this differentiation is indeed tricky to capture, these discussions should help outline a basic differentiation between epistemological and ontological questions.

From the epistemological perspective, the fact-value problem is largely captured by the is-ought problem; it concerns formulations of norms where a norm should not be derived from a fact without an appropriate justification. The formulation of the content of sentiments is not a matter of fact in the same manner as formulation of the content of facts about being an apple is, given the important logical difference between them in their functions. However, the *presence* of a sentiment with a certain *content*, and a presence of such sentiments *universal* among all humans (as Hume saw some such sentiments) is a matter of fact. This is a different type of a problem from Putnam's metaphysical explanation and yet it refers to an ontological issue. Contrasting this ontological understanding with Putnam (2002) and Finnis's (1980) metaphysical explanation demonstrates that the latter concerns an epistemological problem because it refers to types of statement and reasoning. This cannot be said in case of the ontological interpretation as the ontological relation refers to the relation of facts and values with regards the content, not their roles in reasoning. Perhaps the metaphysical (as seen in Putnam and Finnis) and epistemological interpretations are related. However, it is not necessary to answer this question here. At the same time, it cannot be denied that, while a metaphysical explanation can be attached to the point emphasised by Hume, the is-ought problem seems to be, first and foremost, an epistemological point. Even the metaphysical explanation of Putnam refers to issues concerned with reasoning.

Furthermore, Putnam's elaboration on the background behind the interpretation of Hume's metaphysics is explained by Hume's differentiation that vice, virtue and other moral

judgements are sentiments or passions and as such “relations of ideas”, not “matters of fact”. However, it is still unclear why the two categories would be interpreted not merely as a metaphysical *difference* but a metaphysical *dichotomy*. There is no immediate indication in Hume’s writing that we should understand these differences as more than a difference, such as an “omnipresent gulf”. In a footnote, Putnam admits that the dichotomy, or dualism, is *derived* from Hume’s words: “Although Hume nowhere says exactly this [“famous doctrine that one cannot infer an “ought” from an “is.””], the principle "no ought from an is” has almost universally been taken to be the upshot of the “observation” with which Hume concludes the Treatise, Book III, Part 1, section I (and which he says he “could not forbear adding ... which may be found of some importance”)”. He, then, paraphrases the quote included above: “Hume says that in all the “systems of morality" he had met, the author would start in “the ordinary way of reasoning,” proving, say the existence of God or describing human society and suddenly switch from “is” and not” to "ought" and “ought not,” for example from “God is our creator” to "we ought to obey”. No explanation was ever given of this “new relation,” and Hume makes it clear that he does not think this step can be justified” (2002, S. 149 - 150). Thus, Putnam himself admits that the dualistic explanation has been attached to it, rather than read out of it.

This consideration bases on the fact that a reference to what “evaluative” and “non-evaluative” statements *are* (ontologically) is not the same as a reference to moves and derivations between such statements (epistemologically). This observation is very relevant for Finnis’ position. Finnis’ standard interpretation of the problem is the idea that “no set of non-moral (or, more generally, non-evaluative) premisses can entail a moral (or evaluative) conclusion.” (1980, S. 37). On Finnis’ part, it is also a very careful formulation of the is-ought problem. Although he speaks about components of derivations, Finnis does not directly speak about what the nature of these components, what they contain or not contain, *means for making derivations*. Thus, from this statement alone, it is unclear whether Finnis subscribes to the exaggerated dualistic interpretation of Hume according to which *nothing* can justify a move from a fact to a norm. As such, Finnis conceals his position on whether moves from *is* to *ought* can happen. This is probably due to his very own peculiar stand on this point, according to which such derivations do not take place at all (further discussion of this position provided in 3.3.4.1).

Finnis’ second understanding of the passage (first is the “standard” one) is equally interesting. It is another alternative next to Putnam’s interpretation. In his second understanding, however, Finnis does not attempt, as Putnam does, to present the logical-epistemological issue(logical,

because it refers to differences in types of statements; and epistemological, because it refers to their role in reasoning processes, formulation of norms) as a metaphysical one. The second interpretation of Finnis clearly has an epistemological character and is very much aligned with Hume's philosophy and especially his (unclear) position on the role of sentiments and reasons in moral judgements. According to this interpretation proposal, Hume's "arguments are expressly directed against 'those who affirm that virtue is nothing but a conformity to reason" (Finnis, 1980, S. 38). More precisely, in this view, "the gap which Hume says cannot be bridged is not the gap between the factual and the normative, but the gap between any truth (even a 'normative truth', a true proposition about what is good or bad, right or wrong) and motivating conclusions about what ought to be done" (Finnis, 1980, S. 41).

Finnis suggests that Hume refers specifically to an earlier passage in which he asserted that reason alone is not what motivates one to choose between vice and virtue. This earlier passage is the following: "It is one thing to know virtue, and another to conform the will to it. In order, therefore, to prove that the measures of right and wrong are eternal laws, obligatory on every rational mind, it is not sufficient to show the relations upon which they are founded: we must also point out the connection betwixt the relation and the will; and must prove that this connection is so necessary, that in every well-disposed mind, it must take place and have its influence (…) in human nature no relation can ever alone produce any action" (Hume, 2011, S. 197).

This interpretation suggests that in the is-ought passage, Hume refers to the idea that reason and knowledge of what ought to be done, or what is reasonable, is not sufficient to compel one to do what ought to be done. In this interpretation, the 'is' is the knowledge of what is reasonable, or rational. Despite being very aligned with Hume's emphasis on the role of sentiments against the role of reason, as discussed earlier, this interpretation leaves some doubts when comparing it with the is-ought passage. It is quite clear from the is-ought passage that Hume refers to two kinds of statements which are logically different, such as descriptive and normative statements, perhaps also evaluative if we consider Putnam's point about "relation of ideas" ("For as this ought, or ought not, expresses some new relation or affirmation") and that "reason should be given (…) how this new relation can be a deduction from others, which are entirely different from it" (Hume, 2011, S. 198). Thus, Finnis's proposal that Hume does *not* refer to the logical difference between *ought*- and *is*-statements is quite unconvincing.

More importantly, one could argue that Finnis' second interpretation is just a case of the standard interpretation. After all, the *knowledge* of what should be done is a statement of a fact, it is an *is*. "Motivating conclusions about what ought to be done" are nothing else than normative *ought*-statements. The understanding of the second interpretation amounts to a reformulation of the standard interpretation. Or the second interpretation is an application of the standard interpretation in a specific case where *facts* refer to the *knowledge of what is reasonable*. This can be also interpreted as a statement that what I am motivated to do (by reason or sentiments), is not necessarily what I should do. As such, it is a reformulation of the very same is-ought problem which is applied to human biological predispositions: what I am naturally predisposed to is not necessarily what I should do.

Discussion of both interpretations emphasizes the epistemological character of the is-ought problem. In any case, its epistemological nature is undeniable as it is rooted in the fact that the problem refers to reasoning and production of norms, even though metaphysical explanations can be attached to it. However, these discussions only emphasise that the is-ought problem is based on an important logical difference between facts, values and norms. The next section will explore further what this logical differentiation (and Hume's non-dualistic standard interpretation) implies with regards to reasoning that involves facts, values and norms.

3.3 Understanding justified derivations of *oughts* from *ises*

The dualistic interpretation about deriving norms from facts and the idea that an *ought* can *never* be derived from an *is* had not been Hume's suggestion even if his passage (2011) came to be interpreted as such. Hume's passage should be understood as an epistemological principle that is based on the logical differences between facts, values and norms according to which norms should not be derived from facts without appropriate reasons. The sections below are committed to elaborating on and explaining this principle. The focus is shifted from "what Hume meant" and how diverse the different interpretations of his passage can be, to what makes sense to hold about the is-ought problem. In other words, we shall elaborate on the is-ought problem independently of its diverse interpretations by investigating whether and what can justify a move from an *ought* to an *is*, and why.

As will become evident, these discussions will increase epistemological transparency about what happens in case of reasoning involving facts, values and norms. Even though facts and values are logically distinct types of concepts with different epistemological functions and characteristics, their content reveals an ontological relation.

3.3.1 The logical difference between facts and "evaluative statements"

In their understanding of the is-ought problem, Hume (2011), Putnam (2002) and Finnis (1980) refer to a logical difference between the concepts of fact, value and norm that has consequences for their epistemological functions. The three types of concepts have distinct natures, including being formulated in different ways, and have very distinct roles in the process of reasoning. However, values and norms tend to be collapsed into "evaluative statements" in the eyes of many philosophers. For purposes in the present section, we should accept this (i.e. references to "values" or "evaluative statements" can be understood as applying also to "norms" and "normative statements"), however in other sections this differentiation between values and norms will be maintained.

As discussed above, Finnis sees this logical differentiation between concepts in metaphysical terms of Putnam: neither contains the other because they are so different ("no set of non-moral (or, more generally, non-evaluative) premisses can entail a moral (or evaluative) conclusion" (1980, S. 37)). Next to the fact that Finnis speaks about what these concepts are and not whether derivations between them are possible, his statement may be interpreted as absolute. It is unclear also whether Finnis believes that despite their differing nature, they could be combined. If not, this is a statement which may be too strong and too dualistic, as disputed by some, among them Searle (1964). Regardless, the observation is valid that that facts, values and norms are logically distinct concepts and only by being distinct can they fulfil their own specific epistemological functions in the process of reasoning.

It is an important point that there are different types of logical and epistemological differences between factual and evaluative statements (including values and normative statement), although these types of differences are linked. Facts and values, captures by factual and evaluative statements, as types of statement are like apples and pears that cannot be compared in certain aspects. Just like apples and pears differ as types of fruit, so do factual and evaluative statements differ as 1) types of statements with regards to their logical nature, 2) epistemological functions in reasoning processes and 3) epistemological characteristics of how they are produced. Their logical characteristics are intertwined with epistemological characteristics in various ways.

Point 1), from a general perspective, characterises logical differences, as emphasised by Hume, between "matters of fact" and "relations of ideas" (1902). As discussion of Finnis (1980) and

Putnam (2002) showed, such logical differences may be interpreted in different ways, from metaphysical to epistemological ones. Here, it is proposed to interpret them in terms of epistemological characteristics. These epistemological characteristics which contribute to general logical differences between these types of concepts are captured, among others by points 2) and 3). Points 2) and 3) are emphasised due to their relevance in the present context.

Searle (1964) accounts for differences between facts and values as types of statements (i.e. factual and evaluative statements) by emphasising that for factual statements "the question of truth or falsity is objectively decidable, because to know the meaning of the descriptive expressions is to know under what objectively ascertainable conditions the statements which contain them are true or false" (1964, S. 53). This, in turn, is linked with the fact that the function of factual statements is to *describe* the world and, especially, to capture the regular laws operating nature. In contrast, the function of values and norms, collapsed into "evaluative statements", is to reflect agent's personal and individual subjective attitudes.

The above paragraph explains point 2): such "evaluative statements" serve a different epistemological function, i.e. to *express values and respective norms*, rather than to *describe*, as is in the case of factual statements. Searle states that "their job is not to describe any features of the world but to express the speaker's emotions, to express his attitudes, to praise or condemn, to laud or insult, to commend, to recommend, to advise, and so forth" (1964, S. 53). In his quote, Searle speaks about speaker's emotions, attitudes. He also refers to praising, condemning, lauding, insulting, commending, recommending, advising and others. The former are subjective states of a subject linked to subjective evaluation and valuing. They alone (without further justification) can serve as justifications for formulating norms, although these are not necessarily moral norms. The latter are speech acts; however, in these kinds of speech acts what is of relevance is not the acts they aim to perform but their *grounds*. Praising, condemning, commending or recommending, etc., are expression that base on a norm – we praise, condemn, commend or recommend based on an assumed standard. The former, i.e. subjective states, can lead to the latter, i.e. norms that make us praise, condemn, laud, insult, commend, recommend, advise and other.

Similarly, point 3) about epistemological characteristics of these two types of concepts (i.e. how they are produced, formulated) is closely related to points 1) and 2). In contrast to facts, values and norms necessarily involve an agent capable of valuing and producing norms who formulates these concepts. The presence and the content of values and norms requires a

formulating act by such agents (i.e. producing, conferring, embracing, etc. – anything that characterises defining a value or a norm). It may even be argued that the agent must be rational, especially in case of norms of certain character, such as moral norms. Facts, such as laws of nature, are present and true irrespective of agents. They are not formulated but *discovered* by agents. Thus, point 3), in relation to 1), further defines what are the logical differences between facts and values. Moreover, point 3) is related to 2) because the difference in the manner of producing these statements is linked to their epistemological function in reasoning processes. For example, if values and norms were not formulated by agents, they would not serve to express their subjective states.

Beyond points 2) and 3), there are further epistemological, and/or logical, differences between these types of statements. For example, Searle also emphasises that their falsification method is distinct. Searle continues that "To know the meaning of the evaluative expressions is not by itself sufficient for knowing under what conditions the statements containing them are true or false, because the meaning of the expressions is such that the statements are not capable of objective or factual truth or falsity at all. Any justification a speaker can give of one of his evaluative statements essentially involves some appeal to attitudes he holds, to criteria of assessment he has adopted, or to moral principles by which he has chosen to live and judge other people." (1964, S. 53). This shows how very different these statements are. Facts are falsified objectively, with other facts, stemming from experience or empirical inquiry which are processed by reason. Values and norms cannot be justified or falsified by this type of evidence. Values and norms need a justification that explains what is valued and valuable and why it should be pursued. Such justification includes subjective states and/or reasons that explain why certain value is embrace (i.e. a rationale for the goal-setting). They can, but do not necessarily have to, include reasoning and an objective evaluation. This is especially necessary for production of moral values and norms. Without it, subjectively conferred values and norms which may be irrational or unmoral from an objective point of view.

These differences between facts as well as values and norms, as accounted for by points 1)-3), are often dubbed "logical" but they also have epistemological characteristics and relevance. It is difficult to qualify whether the nature of the differences between facts and values as types of statements is "more" logical or epistemological. The best compromise is to settle that epistemological differences such as 2) and 3) suggest that we may refer to these differences *also* as logical (hence, the general point 1)), whereas point 1) is characterised by points 2) and

3). In other words, the logical differences are characterised by epistemological ones. Thus, referring to the differences as both logical and epistemological in the following, respects the frequent reference to logical differences while specifying them (as epistemological).

While points 1)-3) are equally important and interwoven, in the context of the is-ought problem, point 2) is particularly relevant. We should consider these types of statements as different kinds of tools, both equally necessary, to *reason* about our world as well as about how we should act within this world. Looking at them from this perspective, we understand that "evaluative statements must be different from descriptive statements in order to do their job, for if they were objective they could no longer function to evaluate" (Searle, 1964, S. 53). As distinct kinds of tools, we should be aware of their differences in terms of, among others, epistemological functions.

Indeed, points such as 1)-3) increase epistemic clarity about the characteristics of concepts used in reasoning. This, in turn, may increase the quality of reasoning (also, for this reason, we should not treat values and norms as exactly the same concepts, as will be further argued in 3.3.4.3.1). The point highlighted by 2) about the roles facts and values in reasoning processes and how they can lead to norms will become evident in 3.3.3 where examples of reasoning involving facts, values and norms will be analysed. It will be shown that *ought*-statements are conclusions that base on premises involving factual and evaluative statements. Observing these differences also helps achieve better understanding of the is-ought problem as it will help to understand what is happening in reasoning processes.

Among others, in 3.3.3, it will be evident that factual and evaluative statements, as premises, have an *asymmetrical relationship to norms*, which usually constitute conclusions. Evaluative statements, meaning value-statements, have a normative power while factual statements do not have such a power. Factual statements alone cannot produce norms. This is precisely a consequence of the differing nature and function with regards to reasoning involving these concepts. This is true although factual statements are rarely present alone in reasoning processes as one often oversees the implicit presence of assumed values, norms or reasons.

This fundamental difference between factual and evaluative statements with regards to normativity is the reason why the idea of not deriving a norm from a fact, an *ought* from an *is*, is so pronounced. Next sections will apply this consideration with regards to analysing specific examples in order to investigate how norms are formulated with help of facts and values. In

short, in 3.3, it will be demonstrated that if a valid derivation happens, there always is an explicit or implicit premise justifying this move. Such reason is a presence of a “connecting" or a “bridging” statement (a term which will be used further) with a normative power. Value is one of the concepts that have such a normative power and can be used as bridging statements. However, the discussions below will also identify another type of bridging statement, widely understood as *reasons*. Reasons, which will be shown to refer to the characteristics of the content of facts, are additional premises that serve as connecting statements or bridges between *ises* and *oughts*. Reasons that constitute further premises refer to and connect facts, values and norms. All this will be discussed based on reasoning models which necessarily involve derivations and culminate in a normative or a normative ought-statements (where an *ought*-statement refers to a prescriptive formulation of a normative statement). It is possible to make such an epistemically-transparent analysis precisely thanks to differentiating between facts, values and norms as logically and epistemologically different types of statements.

The following analysis shall also defy dualism in the context of the is-ought thesis as it will demonstrate the epistemological process in which facts, values and norms can be linked. The explanation will not only be more precise than dualism, but also will offer more clarity than Putnam’s anti-dualistic statement that facts and values are “merged” (2002). The interpretation emphasises that the is-ought thesis observes the logical and epistemological differences of facts, values and norms and, *as a result*, highlights *correct* (justified) derivations of norms from facts.

3.3.2 Deriving oughts from ises in case of institutional facts

In the section above, it was suggested that an is-ought derivation is possible with a justification which requires bridging premises which are either evaluative statements or reasons. To provide explanation for this proposal, we shall first follow Searle’s argument (1964).

In his article, Searle provides an argument against a dualistic interpretation of the is-ought thesis by showing a process of reasoning in which *oughts* are derived from *ises*. The author takes as an example a case involving institutional facts (in contrast to natural or biological facts which are being addressed here, however his examination is still very relevant for this work). His example is the following:

“(1) Jones uttered the words "I hereby promise to pay you, Smith, five dollars."

(2) Jones promised to pay Smith five dollars.

(3) Jones placed himself under (undertook) an obligation to pay Smith five dollars.

(4) Jones is under an obligation to pay Smith five dollars.
(5) Jones ought to pay Smith five dollars." (Searle, 1964, S. 44)

In his example, the facts (the *ises*) are conveyed by (1), (2), (3) and (4), while the "ought" is present in (5). There is no case of an explicit subjective value-statement, or a reference to a subjective state of a subject. Premise (1) reflects a simple fact such as the fact that trees are green; there is no further meaning behind it. However, premise (2) is more complex and it is further explicated by premises (3) and (4). The fact that the concept of promising involves a concept of obligation is an example of an "institutional fact" (Searle, 1964, S. 55). Institutional facts, according to Searle, are one of two kinds of rules: regulative and constitutive. Searle explains that "regulative rules regulate activities whose existence is independent of the rules; constitutive rules constitute (and also regulate) forms of activity whose existence is logically dependent on the rules" (1964, S. 55). Institutional facts are examples of constitutive rules because they "presuppose such institutions" as marriage money and promising. In other words, institutions, such as promising, are constituted by certain rules which then *result in* obligations, commitments rights and responsibilities which all have moral consequences. This makes institutional facts complex, unlike the simple fact under premise (1).

What Searle shows in his article is the fact that the traditional is-ought thesis, understood as a dualistic thesis advocating an *absolute* prohibition of deriving norms from facts (an *ought* can never and under no circumstances be derived from an *is*), fails to account for examples such as the one above. In the case of Searle's example, an *ought* is derived from an *is* and it seems to be a perfectly plausible move. In order to begin explaining this phenomenon, we should note that the *justification* for such a derivation is provided by Searle's *explanation of what institutional facts are,* i.e. with reference to the nature of these facts and characteristics about their content. This explanation is *partly* given in Searle's discussion, where he explains what such facts are, and is *partly* captured in premises (3) and (4) which contain the consequences of such facts. In his analysis, Searle *specifies* an "institutional fact" by adding further qualifications and explanations that elaborate what is attached to the concept of promising. What is attached to these characteristics of the content of the fact (the fact that promising entails obligations which Searle explains but does not include in the numbered premises), opens the possibility that a moral ought can be invoked. It is the characteristics present in the content of this particular kind of fact, which is necessarily further elaborated by Searle as an "institutional fact" that lead to the possibility of deriving morally relevant norms about what *ought to* be done.

Thus, in Searle's case, there are explicit and implicit bridging premises (present in Searle's analysis and in premises (3) and (4)) about the characteristics of institutional facts which provide *reasons* that explain why a move between a fact and a norm is possible. Information that refers to what institutional facts are and what characterises their content, provides *reasons* that bridge the factual statements with the normative conclusions. These reasons refer to the characteristics and contents of the fact involved. It is worth noting that this conceptual presupposition is not of epistemological nature because it does not just pertain to fact as a type of concept; otherwise it would pertain to *any* fact, not just an institutional fact. It is much more fundamental as it defines the very *characteristics* of institutional facts which then explain their *content*. It simply characterises what institutional facts *are* and what they *mean* (in terms of content). As the author notes himself, one conclusion from Searle's example is that it is necessary to understand the characteristics about *facts* that explain their content as they may hold explanations that serve as *reasons* with normative implications.

Searle also considers familiar objections to his argument. He considers a statement according to which his example is an ought-ought derivation, rather than an is-ought derivation or that there is a hidden evaluative premise. This "objection" has good grounds; however, it is difficult to perceive it as an objection given that very similar observations have been used to explain what happens in the example. As discussed above, the very concept of promising, and the *fact* of having promised, based on its fundamental characteristics, has "evaluative" implications ("evaluative" in Searle's terminology – or more precisely, normative implications). Thus, it is true that institutional facts *by definition* involve the possibility that an *ought* can be invoked, and it is difficult to deny that they contain an evaluative element. However, they still remain facts, with or without an evaluative element with normative implications. As explained above, the characteristics of the content of institutional facts is owed to the conceptual design that involves presupposes different assumptions which characterise their normative possibilities that constitute what this concept is. This definition of the concept, i.e. what it *is*, warrants *reasons* which lead to normative conclusion.

Whatever they may entail in their definition, institutional facts are facts and the philosopher successfully shows that there are cases where an *ought* can be derived from an such facts and he can give a *justification* for it. This is true even if the justification or the reasons show that there is an evaluative element involved or that there are normative implications within the content of this fact. An *ought* can be derived from an *is* and there are plausible reasons for it linked to the definition of the concept or to further relations that the concept carries. Indeed, the "objection" to some extent appeals to the justifications for why deriving an *ought* from an

is makes sense. The fact that the justification is within the definition of the concept or is linked to other implications or relations that the concept carries, does not make a fundamental difference to it being a factual type of statement. Nevertheless, it is true that despite the possibility that we can delineate facts, values and norms, concepts are rarely black-or-white to the extent that they can be only factual, only evaluative or normative and that they cannot have a complex mixed nature. We can say that an institutional fact is a fact but its definition, design or its characteristics, can be further elaborated to indicate elements (assumptions) that have evaluative implications.

Indeed, because reasons provided expose the complex nature of institutional facts, Searle proposes that such facts have both factual and evaluative elements. The author states the following: "if you like, then, we have shown that "promise" is an evaluative word, but since it is also purely descriptive, we have really shown that the whole distinction needs to be re-examined. The alleged distinction between descriptive and evaluative statements is really a conflation of at least two distinctions. On the one hand there is a distinction between different kinds of speech acts, one family of speech acts including evaluations, another family including descriptions. This is a distinction between different kinds of illocutionary force. On the other hand, there is a distinction between utterances which involve claims objectively decidable as true or false and those which involve claims not objectively decidable, but which are "matters of personal decision" or "matters of opinion." It has been assumed that the former distinction is (must be) a special case of the latter, that if something has the illocutionary force of an evaluation, it cannot be entailed by factual premises. Part of the point of my argument is to show that this contention is false, that factual premises can entail evaluative conclusions. If I am right, then the alleged distinction between descriptive and evaluative utterances is useful only as a distinction between two kinds of illocutionary force, describing and evaluating, and it is not even very useful there, since if we are to use these terms strictly, they are only two among hundreds of kinds of illocutionary force; and utterances of sentences of the form (5)- "Jones ought to pay Smith five dollars" -would not characteristically fall in either class" (Searle, 1964, S. 58).

Thus, Searle suggests the interpretation that "promise" is both evaluative and descriptive because it is objectively true that someone made a promise and what that promise entails. Based on this, he proposes to accept the complexity of some concepts. Nevertheless, he even goes further to suggest that the differentiation between evaluative and factual, most likely understood as a dualistic differentiation, is not a useful one. However, the argument in this work suggests an explanation that Searle would likely accept: one can reject a dualistic

understanding of the differentiation between facts, values and norms without rejecting the epistemic value of logical delineation of these concepts. We can, and should, maintain a delineation between facts, values and norms for purposes of increasing transparency in understanding reasoning process. However, at the same time, rejecting dualism means accepting that some concepts may have a dual nature because of their definition that combine different types of elements. In any case, it is by means of the basic conceptual tools, such as fact, value and norm, that one can also capture concepts with a mixed nature and indicate its factual and evaluative and/or normative elements. In, this discussion also suggests that Finnis' dualistic formulation that "no set of non-moral (or, more generally, non-evaluative) premisses can entail a moral (or evaluative) conclusion" (1980, S. 37) is indeed inaccurate. Institutional facts entail precisely such premises that entail normative, even moral, conclusion.

By acknowledging that there are important differences between factual, evaluative and normative statements, we recognize that a move from a fact to a norm requires a bridging premise which is either an evaluative statement or a reason. Searle's example made it particularly evident what such reasons could be and how they refer to underlying characteristics about facts. This shows the need for a similar inquiry into biological facts in order to understand what about their characteristics and content makes is possible to move towards norms. Moreover, we shall also enquire about the role of values in this context. This analysis will also expose certain points about biological facts which will be a preface to shifting the discussion to the ontological level of this relation in chapter 4.

3.3.3 Deriving oughts from ises in case of biological facts

One could say that analysing Searle's (1964) examples is one thing; another is to address more controversial examples of alleged is-ought fallacy in the context of references to nature and biological facts. Such derivations are often referred to as naturalistic fallacies, although Callicott (2008) argues that the name has become falsely attached to it, as the founder of the term G.E. Moore has used it in a different context[25]. This type of is-ought fallacy came to be understood as a case where one derives a (moral) norm from a natural or a *biological fact*. The is-ought fallacy objection is often used against positions advocating any kind of relation between nature, any kinds of biological facts as well as values and moral norms. It is used in case of singular statements as well as in case of entire theories which recognize relevance of such facts, such as natural law theory.

[25] The difference will not be investigated here; it is assumed that the term «naturalistic fallacy» refers to the is-ought fallacy in the context of references to nature in valuing and normativity.

References to *biological facts* are here understood interchangeably with references to nature, The two types of such biological facts will be considered here: 1) *the presence of a predisposition*, such as an urge, or 2) *the knowledge about our biological urges, predispositions and functions*. The specification of these two types of facts is based on the analysis of what types of biological facts are actually discussed by authors such as Finnis (1980), Orrego (2004), Foot (2001) as well as Ruse (2017), de Waal (2006) and others.

There are different biological functions and predispositions which are predefined by the biological structure of our bodies. We need to eat, drink, breath, excrete substances from our bodies. These are considered to be functions that directly sustain our bodies and are operated by different organs. However, we also have less physical and more psychological needs such as the need to be among people, family, or to have romantic relations which also can be considered biological. We are aware of these needs because they generally manifest themselves as predispositions (or, in the language of the natural law theory, as inclinations) to every human. We are predisposed towards pursuing them because they have certain biological purposes. The presence of functions and predispositions, as well as knowledge about what contributes to their *biological purpose* are what the term "biological facts" refers to. The phenomenon of references to nature consists in the fact that we have these predispositions which, incidentally, we also *decide* to follow and value. In many cases, they are rational to follow because they allow us, more or less directly, to maintain proper functioning of our bodies and survival. Life is a fundamental value intrinsically but is also valuable instrumentally as survival allows us to pursue our goals. Valuing life implies dependence on the biological design relates. This is a very brief outline of the understanding that will be further explored in the next chapters. However, it is useful to keep it in mind as a background in analysing reasoning models that involve values and references to nature.

This value of biological facts is considered as either obvious or controversial. It can be controversial because biological predispositions are not always rational. They are sometimes valued even if they are not valuable. Deducing norms from biological facts can be questionable, however it can also be justified if there are appropriate reasons, that shall be explored below. Such cases also do not undermine human autonomy because, as is highlighted, the entire process is a reasoning process *performed by the agent*.

A typical model of such a reasoning process could be the following:

P1: I have the urge to eat (a fact about a presence of a biological predisposition, an *is*),

C: therefore, I should eat (a prescriptive normative statement, i.e. an *ought*).

At the first sight, it looks like a typical example of an is-ought fallacy, even though, intuitively, the drawn conclusion does not seem inappropriate. In many such cases, an evaluative premise such as "I value eating" (irrespective of whether a reason can be further provided for it) is implicitly hidden between the *is*- (P1) and the *ought*-statement (C). The whole argument looks as follows:

P1: I have the urge to eat (a fact about a presence of a biological urge or predisposition, an *is*),

P2: I value eating (subjective evaluation, a value-statement),

C: therefore, I should eat (a prescriptive normative statement, i.e. an *ought*).

Because subjective evaluation, such as the one under P2, is usually understood to have a normative power, P2 is sufficient to serve as a bridging premise. This is true even though it does not necessarily involve reason or lead to a moral norm. In this statement, the subject *values in a way that is aligned with the fact*, or simply values the fact. As a result, a norm is produced which is *aligned with the fact*. This phenomenon demonstrates how valuative statements, such as those based on simple subjective states as the urge to eat, have a normative power. Referring to this, Callicott states that the "mystery of the passage from "is" to "ought"" (Regan, 1980, S. 363) "dissolves, on Hume's own grounds, when the missing premise referring to passion, feeling, or sentiment is explicitly included in the argument" (2008, S. 122). This is indeed widely understood so, as discussed in chapter 2, even though such a normative conclusion does not necessarily involve moral reasoning and is not a moral *ought*. It also is a case of subjective valuing.

Further, to this example one can add reasoning under a third premise, P3. A *reason* refers to P2 and explains why (or whether at all) eating is valuable to the subject (why the subject *should* value it). In this case, the reason can refer to the biological fact that eating sustains life which is why it is valuable and should be valued by the agent. However, this reason does not substitute an evaluative statement, but, in this case, justifies or validates a subjective value (in other cases, it may also lead to embracing a value that did not originate in subjective states, i.e. "exciting passions" (Hume, 2011)). The reason involved offers an objective evaluation against an

objective standard (the fundamental value of life) and, as such, supplements the subjective evaluation in the premise P2. It is the agent who embraces the biological predisposition as valued *and* valuable based on subjective and objective elements of reasoning in their epistemological exercise.

P1: I have the urge to eat (a fact about a presence of a biological urge or predisposition, an *is*),

P2: I value eating (subjective evaluation, a value-statement) *because* eating helps sustain my life (reason),

C: therefore, I should eat (a prescriptive normative statement, i.e. an *ought*).

Similarly as in case of Searle's example, such *reasons* refer to the characteristics of biological facts. In this case, they refer to the embedment in nature of the agent which explains the fundamental value of life: eating is valuable to the agent because it helps sustain life and life is intrinsically and/or instrumentally valuable to the agent, as it enables them to pursue further goals. It is evident that this reason, which refers to further characteristics that explain the biological fact (embedment in nature), *bridges* the fact (eating supports biological functions that sustain life) and the value of eating via the fundamental value of life. This inquiry into the characteristics of the biological facts that make them valuable is of ontological character as it refers. In this case, referring to fundamental "defining" characteristics of this type of fact (biological facts) is an inquiry about the natural world (empirically). This phenomenon shall be explored in chapter 4.

What is of relevance for this chapter, is the demonstration that the movement from a fact to a norm is justified by an evaluative statement which bridges P1 with C. It can be supplemented by further premises, such as the reason that refers to a more fundamental nature of the fact and its relation to value. This phenomenon where the fact is embraced as valued and (justified as) valuable can be understood as (and will be referred to as) an *alignment* between fact, value and norm.

Moreover, this example shows that, in the initial formulation, both kinds of bridging statements (evaluative P2 and reason P3) were implicitly hidden. Such examples often lead to an impression that an is-ought fallacy takes place. In addition, it is often easy to oversee that the fact actually *becomes valued by the virtue of agent's act of evaluation*, whether subjective or objective. At the other extreme, this leads to the idea that biological facts and values are

"merged" (Putnam, 2002) or (Fuller, 1958). In such cases, philosophers have the impression that some statements that are linked to biological functioning or predispositions, value of which we take for granted, are *both* descriptive and evaluative (in a different sense than it was in the case of Searle (1964)). Examples such as this make some philosophers believe that biological or, more widely, natural facts "carry" values (Rolston, 1982) or values are "discovered simultaneously" with facts (Rolston, 1975) (see 3.3.4.3). This is a mere oversimplification that blurs the epistemological importance of agent's autonomous choice to embrace the fact as a value. As much as this was the case in the example of Searle's institutional facts, so in the example above, one can always spell out different elements involved in phenomena and identify the implicit premises. Facts are *made* valuable by agents.

The above was a very simple and basic model and there are more controversial ones. Let us take an indirectly biological case, but one which represents more controversial cases because it has a possible biological background. For example, this can be an urge to prank someone. This could be considered as a biological example because having an urge to prank somebody may simply *occur* to someone without any link to reason or to a rational formulation of values. It may be an arbitrary subjective state with a biological background referring based on passions or urges. It is considered biological (or natural) not only because it simply occurs *naturally* and self-evidently. It may even be linked to biological background of human nature, such as to some features of psychology. It is indeed not important whether such urges have or have not been ascribed a biological function or a biological explanation whatsoever. Just like natural inclinations in natural law theory, such urge-based subjective states simply *occur* without any involvement of rational goal-setting or objective evaluation.

P1: I feel like pranking somebody (a fact about a presence of a biological urge or predisposition, an *is*),

P2: I want to prank somebody[26] (subjective evaluation),

C: Therefore, I should prank somebody (a prescriptive normative statement, i.e. an *ought*).

Technically, this example is not an is-ought fallacy because P2, as an evaluative statement, has a normative power. However, in this example, it is clear that one cannot speak of moral normativity. In fact, one could say that the normative conclusion is unmoral because pranking

[26] As in «I value pranking somebody».

can be bad objectively and it can be bad for the addressee of the prank. As has been argued in chapter 2, it would certainly be beneficial to supplement this subjective evaluation with reasoning about whether pranking is valuable (i.e. rational). In other words, this would be an objective evaluation as to whether the subjective desire to prank is rational, moral and valuable. A reflection on the reason for valuing pranking and its objective evaluation, may actually have the effect of leading the agent to realize the pettiness (and irrationality) of this subjective desire. It leads the agent to reflecting on *why* pranking is *valued* and *whether it is valuable* thereby enabling rational, moral and objectively sound decisions. In other words, reason would *convince* the agent to reject one value and embrace another.

A good example of this is Martha Nussbaum's (2016) suggestion on anger and anger-driven actions. There are inclinations that may similarly be understood as natural, such as the desire for retaliation or anger-driven retribution. They may even be explainable with reference to evolutionary adaptations (Nussbaum, 2016). However, as Nussbaum observes, from the point of view of morality and rationality, it is questionable whether anger and revenge are morally and rationally justified. Indeed, in her work, the philosopher *argues* that, while our retributive perception of justice builds on embracing the emotion of anger, this is neither moral, rational, nor valuable. Nussbaum suggests an alternative, non-anger-based perception of justice as she criticises the tendency to formulate conclusions from subjective anger-based urges. Such considerations are an example of how one does employ our mental capacities to reason, evaluate objectively and, subsequently, to find more reasonable alternatives to some natural *tendencies*.

Callicott's (2008) discussion of a teenager smoking cigarettes is another example that refers to both types of biological facts, i.e. the presence of an urge and the knowledge about our biological functions. The teenager *has* a subjective state, an urge, inclination or desire to smoke. This desire may result from more directly biological causes such as addiction. Perhaps the teenager is not addicted but only wants to smoke because they are feeling rebellious or think this is what will impress others. Thus, it may also be tied to natural (biological) psychological causes. Or the subjective state may be considered natural because it simply *occurs*.

In any case, the teenager moves from subjective evaluation to a norm. It is technically correct, because of the normative power of subjective states, even though, from an objective point of view, it is irrational. The example of teenager's technically justifiable argument in favour of

smoking shows, once again, that a framework according to which such arguments are defensible does little to further the message that rationality and morality should be guiding our actions.

P1: I have the urge to smoke cigarettes (a fact about a presence of a biological urge or predisposition, an *is*),

P2: I value cigarette-smoking because it satisfies my desire to smoke (subjective evaluation),

C: Therefore, I should smoke cigarettes (a prescriptive normative statement, i.e. an *ought*).

The is-ought issue would pertain to this example in another form. It is a quite universally recognized that for an *objective reason* we do not want our children or relatives to smoke even if the choice is theirs. Thus, in Callicott's analysis, the parent of the teenager would object to their smoking by stating that "You *ought not* smoke cigarettes, (…) because cigarette smoking *is* deleterious to your health" (2008). Callicott notes that the teenager could object by saying that their parent is committing an is-ought fallacy. The fallacy would mistakenly be understood as consisting in the parent's use of the *fact* that "smoking is deleterious to one's health" as a justification of the norm that the teenager should not smoke. In other words, a norm is derived from the fact. This kind of objection is indeed very frequently used in similar cases of reference to natural or biological facts. It not only seems to be unreasonable in end effect: how can we promote the idea that the fact that smoking is deleterious to health is irrelevant to reasoning about what one should do?

Demonstrating why this is mistakenly perceived as an is-ought fallacy is very simple. The fact that "smoking is deleterious to one's health" is a biological fact, and more specifically of type 2), i.e. a knowledge about our biological functions. As 2), it refers to what is good or bad to our bodies from the perspective of its biological design, thus, it requires knowledge about biology. However, this fact is *not put forward without a reason*. Although implicit and such statement has to be revealed, the parent suggests that this fact is valuable by means of an objective evaluation that refers to the fundamental value of life and health, respectively. It is bad to do whatever is deleterious to our health because health is valuable as it protects life and allows us to pursue our goals. Thus, the objective reason is not just a fact; it further consist of an objective value and norm, which are showed to be valuable according to reasons.

P1: Cigarette smoking is deleterious to human health (a fact- *knowledge about* biological functions),

P2: Health is valuable (objective evaluation) *because* it helps sustain biological functions and, thus, life, where life is valuable intrinsically and/or instrumentally because it helps pursue further goals (reasons linked to fundamental values against which objective evaluation is made),

P3: I value my health (subjective evaluation),

C: I should not smoke cigarettes (a prescriptive normative statement, i.e. an *ought*-statement).

In the above example, with P2, the agent *embraces* the value of health and the value of not smoking (implicit in the *ought*-statement) because of *reasons* that make health *valuable* and smoking *not valuable*. This is an example where reason "excites" subject`s passion, or subjective states. Perhaps the teenager is already mature enough to ask themselves why he or she considers cigarette smoking good and may *become convinced* that smoking should not be valued, as in P3.

The facts in these examples are both in premise P1 (smoking is deleterious to one's health) as well as in the objective evaluation in P2 (biological fact about our embedment in nature: health, according to biological design, helps to sustain life). Ultimately, both facts refer to one and the same general fact that our bodies are embedded in the biological design. Pursuing the fundamental value of life is to a large extent biologically conditioned. Thus, very frequently, what supports biological functions is valuable and valued because it is evolutionarily geared towards life (survival) which is good for agents, from their subjective perspective. This is why so many such facts are embraced by agents as valued and valuable.

This exercise reveals that reasoning models that involve norms derived from biological facts demonstrate that in many cases such reasoning models are justified. There are often implicit bridging premises based on values and reasons, subjective and objective evaluation and references to further facts that justify or validate such derivations. Furthermore, it becomes evident that references to biological facts made in the context of reasons and objective evaluation expose that with such bridging premises, facts and values can be epistemologically linked. The reason why such linking is possible, or reasonable, refers to our embedment in nature and is of ontological character (see chapter 4).

Finally, this discussion demonstrates that the transparency of the reasoning process, and thus its epistemic quality, is much higher thanks to maintaining the logical delineation between facts, values and norms. We see clearly when there is no is-ought fallacy *because* we apply the differentiation between these different types of statements. This clearly confirms the emphasis made by many philosophers on logical differences between these different kinds of concepts and shows that this delineation can be maintained in a non-dualistic manner.

3.3.4 Derivation and its justification: a discussion

In line with the interpretation of Hume's passage (2011) as promoting *justified* derivations of *oughts* from *ises*, norms from facts, above sections have attempted to establish, based on examples, how norms can be derived from facts and what justifies such moves. There are four different concepts at stake in this problem: facts, values, norms and reasons. Although values and norms are often merged due to their close relationship (normative power of evaluative statements), differentiating between them has benefits in this context.

The analysis has exposed many points that require further discussion and will be the subjects of the subsequent sections.

3.3.4.1 The necessary role of reason in formulation of norms from facts

It was shown that derivations can be justified by premises which link a fact with a normative conclusion. These premises work literally by linking the fact with the norm; either by means of a *values* or *values and reasons*. An evaluative premise makes the fact *valued* and justifies a normative conclusion that is aligned with the fact. Another type of a bridging premise is constituted by reasons. Reasons can be diverse; however, what is characteristic about them is the fact that they refer to properties of involved facts, i.e. they focus on their content, relevant to formulation, or more precisely derivation, of norms and values. With such a logical reference, they *justify* a link between the fact and the norm because they provide reasons, and thereby convince the valuer, that the fact is *valuable*; as such, the valuable fact can also become valued. Although involvement of reason is preferred and should be promoted, it is the case in reality, that norms a frequently derived based on subjective states alone.

Thus, reasoning applied in objective evaluation is very valuable. As already observed in chapter 2 (e.g. 2.2.3.2), reason is necessary in normative exercises of objective character, including for moral purposes. Reasons justifying why facts are *valuable* can convince agents to value them. This phenomenon could be understood as reasons "exciting passions", as Hume (2011) said, by showing us what is valuable.

Whenever reason is involved, objective standards are present against which reasoning is made. In cases of biological facts, the objective standard was understood as the fundamental value of life. The reason links the value of life and the biological design because we are embedded in nature: in order to stay alive, we must respect biological design, at least to a certain extent. If such reasoning is morally relevant, the normative conclusion may be of a moral character (e.g. as in the case of Kant described in 2.2.3.3). However, even if objective evaluation is absent, moves between premises and conclusions involve derivations and are still instances of reasoning, although such reasoning may not be based on objective and rational values.

The finding that justified is-ought derivations are possible when there are appropriate bridging premises involving values and reason goes against John Finnis' strategy for addressing the is-ought objection to natural law theory. The discussion of this interpretation against Finnis' can highlight the role of reason and provides further clarifications about the nature of justifications of such moves.

Finnis' (1980) claim is that there *is no* derivation at all in case of natural law's moral norms. Finnis asserts that, due to the fact that some goods refer to urges or predispositions which are rational and natural, natural law theory consists of *self-evident* principles of practical reasonableness which inform us about what should be done. Precisely because these principles are self-evident, Finnis argues that there is no derivation: "one does not judge that 'I have [or everybody has] an inclination to find out about things' and then infer that therefore 'knowledge is a good to be pursued'. Rather, by a simple act of non-inferential understanding one grasps that the object of the inclination which one experiences is an instance of a general form of good, for oneself (and others like one)" (1980, S. 33).

There are simple objections to Finnis' approach. First of all, even if we often do not guide our actions based on *explicit formulations* of premises and conclusions such as the ones in Finnis' quote, it does not mean that there are no premises and conclusions involved. As was shown above, in many cases, premises are hidden and implicit. Sometimes we are guided by norms which are not formulated according to their logical sequence, i.e. beginning from premises to a conclusion. Sometimes we assume norms involving certain premises for granted, without inquiring into these premises. However, unless we are confronted with a genuine is-ought fallacy, such elements are often involved in an *implicit* way and can be *revealed*, as was done in the examples above.

Thus, the problem with Finnis' (1980) proposal is that, just because we sometimes do not explicitly mention justifications or premises, does not mean that they are absent. Sometimes norms are self-evident and one assumes them without inquiring into or analysing premises and conclusions that they involve. If anything, Finnis' point that we often assume norms self-evidently without reasoning point out that we do not involve reason sufficiently. Unless reasoning about norms that are in any way self-evident is involved, there is no way to genuinely decide whether they are good or bad. Certainly, many norms that are self-evident even to the wise (however the wise are defined), can still be defective from objective points of view. Being self-evident to the wise does not seem like a reliable method for recognizing value's rationality. Even if Finnis argues that the wise do not perform derivation, there must be reasons that justify such norms and values. Perhaps being self-evident to the wise means that the wise are so well-trained that they perform such arguments without explicit formulation. However, if asked, they certainly can *give reasons* why they hold some inclinations to be reasonable. As long as they can provide such reasons, arguments in form of premises and derived norms are available.

This is very much unlike Finnis' positions with regards to natural law theory. Neither Finnis (1980) nor Aquinas (at least according to Finnis (1998)) suggest that *all* natural inclinations, or self-evident norms, are rational. Both natural lawyers' requirement for a practical principle of natural law is its *rationality*. Indeed, Finnis emphasizes that what is rational is natural and not the other way around. Practical reasonableness shows us what is desirable and not desired, which is why we cannot equate it with simple biological inclinations: "'it is good because or in so far as I desire it', but 'I desire it because and in so far as it is good'" (Finnis, 1980, S. 70). However, to find out which norms or values are reasonable, necessarily involves a process of reasoning.

Finnis seems to appeal to the fact that some natural inclinations which we have also *happen* to be rational. However, such occurrence is incidental unless they are rationally scrutinized. There are at least two ways to involve reason into valuing, based on examples above. We can assess the rationality of our *present*, self-evident inclinations, urges, desires or sentiments as potential norms, or any other subjective states. In other words, one evaluates (objectively) a subjective value as a "candidate". This is the case with natural inclinations in natural law theory. Alternatively, one can reflect on what should be valued in a more prospective manner and in the absence of suggestions (such as those by natural inclinations, urges, desires or sentiments). In such cases, agents embrace values that are justified to them as rational. In both cases, one

reasons in a slightly different order. A value, and/or a norm, is either validated or justified and embraced. However, this does not change the fact that in both cases moves between premises and conclusions take place. It is a contradiction to say that what is reasonable is self-evident; what is self-evident are biological inclinations and what is reasonable requires rational justification.

Even if one does not explicitly formulate reasons, when arriving at a conclusion, one can always *demonstrate* reasons. The fact that Finnis needs to *justify* his selection of basic goods (more precisely, justify by validating natural inclinations) over hundreds of pages is an evidence of this. It is evident that Finnis cannot remove reasoning, thus derivations, in his quote: "I am contending only (i) that if one *attends* carefully and honestly to the relevant human possibilities one can *understand*, without reasoning from any other judgment, that the realization of those possibilities is, as such, good and desirable for the human person; and (ii) that one's understanding needs no further justification" (Finnis, 1980, S. 73)[27]. Attention should be paid to the words emphasized in italics. Actions that include "attending" or "understanding" are linked to reasoning. The idea that one can "understand without reasoning" is indeed odd. Indeed, the recognition of this derivation by Finnis would go very well with his theory and his rejection of this very important step is very interesting given his emphasis on the role of reason.

It is possible to argue further that Finnis' (1980) relative success with arguing that principles of practical reason are self-evident is owed to a slight trick in his argument. Namely, Finnis explains the idea of self-evidence on the example of basic good of knowledge, whereas knowledge is an epistemic value. He argues that the value of knowledge is indemonstrable because epistemic "principles of theoretical rationality are not demonstrable, for they are presupposed or deployed in anything that we would count as a demonstration" (Finnis, 1980, S. 69). While this may apply to epistemic values, the same argument does not necessarily apply to all other kinds of basic goods, such as play or friendship (indeed, a similar reference to epistemic values is also used by Putnam (2002)).

Thus, more often than not, reasoning takes place behind derivation of any norm, whether it involves facts or facts and values or facts and values and further reasons (however, just because we are capable of reasoning does not mean we do it well. In other words, reasoning is fallible,

[27] Emphasis added.

as pragmatists point out.). Often, such derivations are implicit. Reason has a necessary role in provision of moral norms and *oughts* by "informing us of the existence of something which is a proper object of it" (Hume, 1902). In this epistemological exercises or reasoning performed by an agent, reason can bridge facts, values and norms by making facts *valuable*. Thanks to the reasoning capacity involved in objective evaluations, one can resist certain natural inclinations and choose more rational and moral alternatives. Now, what this shows in the context of this work, is not only important for interpreting the is-ought thesis. It also shows that references to nature, biological facts, can be justified and respective reason indicate a more underlying relation of valuing to these facts.

3.3.4.2 Reasons referring to the characteristics of the content of facts exposing the ontological relation of biological facts and values

The discussion shows that reasons justify why in certain cases facts are valuable and can be (and should be) valued. It was highlighted that such reasons refer to certain characteristics of the content of facts which explain the relations between the contents of values and facts. With the help of such reasons, normative implications are invoked. It is argued that such relation is of ontological character because it refers to what about its characteristics, that define and are manifested in their content, has potential evaluative and normative implications (as opposed to their logical nature and epistemological functions and characteristics).

In the case of biological facts, such reasons are clearly different from reasons in the case of institutional facts as both types of facts have different definitions and characteristics. In the latter, the content of these facts is constituted by definitions composed by human agents. In the former, biological facts, the content of facts is constituted by the laws of nature, independently of human agents. So, in case of institutional facts, reasons bridge facts, values and norms by means of reference to the definition of the concept of an institutional fact. In the case of biological facts, reasons bridge facts, values and norms by means of reference to normative aspects of our embedment in nature (see section 4.6).

The reference to biological facts is argued to be due to our embedment in nature. This seems to be a vague concept and, indeed, it is difficult to grasp. As explained above, this statement refers to the fact that biology defines our biological functions and the necessary conditions to pursue life. Since life is fundamentally intrinsically and instrumentally valuable, this is the reason why valuers frequently value biological facts in a manner *aligned with* biological functions. The examples above show cases of such alignment. In such cases, in objective

evaluation, reason invokes this reference to embedment in nature *because of* the fundamental value of life. The value of life is the fundamental standard against which objective evaluations take place and reasons as premises convince agents to embrace values creating a bridge between factual and normative statements. This link between biological facts (biological functions and biological design) and valuing is argued to be a manifestation of the ontological relation of fact and value which will be explored in chapter 4. Clearly, it is a simplification from the point of view of moral reasoning to suggest that referring to the fundamental value of life and biological contribution to it suffices for moral norms. Nevertheless, the point here is to expose the very important fundamental relation between biological functions, values and normativity present in such examples.

All this demonstrates how in valuing and formulating norms *we* refer to objects, things that are ontologically in the external world. These considerations show that it is perfectly plausible to refer to objects, for example, when biological facts help us pursue the value of life or other values. An object can be a fact about a presence of an urge. It can also be the fact that some urges (e.g. eating) allow to sustain life and pursue further goals. At the same time, such references by no means minimize the role of subjective valuing, as it is the agent who embraces facts as valuable. This applies to any case of reasoning, either validating present subjective states or embracing values that are shown to be valuable (rational).

3.3.4.3 *Promoting the delineation between facts, values and norms as factual, evaluative and normative for epistemic clarity*

When agents embrace facts as valued and valuable, and respective norms are formulated, one can speak of the alignment of facts, values and norms. It is argued that providing this clear explanation is possible *because* we distinguish between logically different types of concepts involved and respect their characteristics, including the dependence of values on valuers. With this approach, one can clearly indicate which statement is factual, which is evaluative and normative, what are the reasons and how all these types of statements stand in relation to each other. Respecting the delineation between different types of statements involved allows examining their relationship in reasoning models and judging whether reasoning is plausible.

Different types of statements, such as facts and values, have different epistemological functions (i.e. functions in reasoning processes). This is partly due to the fact that they are logically distinct types of statements, as emphasised by Searle. What follows, is that they also have different epistemological characteristics, in the sense that they are produced in differing ways.

As noted elsewhere (3.3.1), facts are *discovered*, and their content, or the validity of this content, does not depend on the valuer. The valuer only observes the phenomena that can be descriptively captured. Values, in contrast, are produced by being formulated by an agent. Their content and its validity depend entirely on the agent and the epistemological processes, involving reasoning or not, that lead to formulation of such values and norms.

The logical differences (1) and the differences in the epistemological processes that produce these types of statements (3) are linked with the differences with regards to their functions in reasoning models (2)). These are different but interrelated types of differences that can all be referred to as logical and epistemological (or epistemologically-relevant). Nevertheless, it should be noted that despite this general outline of such logical and epistemological differences, one should recognize the possibility that statements have mixed nature because they are complex, as already observed by Searle (1964). Some concepts can be both factual and evaluative. Still, it is precisely through maintaining this delineation between types of statements, in a non-dualistic manner as a differentiation rather than dualism, one is able to grasp the logical and epistemological nature of these statements as well as their epistemological functions. The emphasis on this delineation certainly is a useful tool. What is particularly important, is that the dependency on the valuer of the entire process of valuing and formulation respective norms, such as in models in 3.3.3, is well captured in this manner.

Thus, while highlighting the differentiation, or delineation, one is led to observe that biological facts and values are *aligned* when facts, such as about what contributes to health, are embraced, made valuable, because valuers value health or life. It is precisely the emphasis on the differentiation that necessitates the use of the term "aligned". This is because the term "alignment" allows to recognise that two phenomena or concepts are distinct but that they stand in a parallel relation to each other. Nevertheless, precisely this point is often neglected by authors which leads their theories to be epistemologically inaccurate. This, in turn, may be understood as undermining the role of the valuing agent, their autonomy, as well as employment of reason (as was evident in Hart's critique of natural law theory (1961) outlined in the introduction). This problem will be briefly outlined here, based on the account of Holmes Rolston III ((1975) and (1982)), and it will be further elaborated in section 5.2.

This is how Rolston reports what happens when valuers embrace facts: "The laws of health are nonmoral and operate inescapably on us. But, circumscribed by them, we have certain options: to employ them to our health or to neglect them ("break them") to our hurt. Antecedent to the

laws of health, the moral ought reappears in some such form as "You ought not to hurt yourself." Similarly the laws of psychology, economics, history, the social sciences, and indeed all applied sciences describe what is (has been, or may be) the case; but in confrontation with human agency, they prescribe what the agent must do if he is to attain a desired end. They yield a technical ought related to an if-clause at the agent's option. So far they are nonmoral; they become moral only as a moral principles binds the agent to some way" (1975, S. 54)[28]. In this quote Rolston correctly emphasises that it is "human agency" which transforms facts into values – or, more precisely, attaches values to facts. This is done by justifying facts as valuable, providing appropriate reasons that convince an agent to a value.

However, Rolston goes further to undermine the epistemological point (given that he discusses *how* norms and values *are formulated*) he has made by deducing from it a conclusion about what these norms and value *are* with regards to their content. "What is ethically puzzling, and exciting, in the marriage and mutual transformations of ecological description and evaluation is that here an "ought" is not so much *derived* from an "is" as discovered simultaneously with it" (Rolston, 1975, S. 62). By saying that an *ought* is *discovered*, Rolston suggests that the norm is *not formulated* by the agent but in some way *is* there prior to the epistemological act of the agent. This account creates confusion not only because it conflates epistemological with ontological perspective. More importantly, it undermines the role of autonomous agency, despite the author's own prior emphasis on the agent. Rolston cancels the emphasis on the epistemological step dependent on the valuer that takes place between presence of facts and embracing them as values and norms. In effect, his position seems to imply that no such step, or deduction, between facts and values/norms is present. This is a stand reminiscent of Finnis' unconvincing argument that there is no derivation (see 3.3.4.1).

The above statement of Rolston is only one example of an inaccurate account of the phenomenon of reference to facts in values and normativity, or of the relation between fact and value. The same applies to author`s statements that facts, natural facts or nature, "carry values" (1982). In another work, the author provides a description of the interrelation between natural facts and values in the following way "we value a thing to discover that we are under the sway of its valence, inducing our behavior. It has among its "strengths" (Latin: valeo, be strong) this capacity to carry value to us, if also to carry values we assign to it. This "potential" cannot

[28] The example was as follows: "You ought to recycle (Proximate Moral Ought) – for recycling preserves the integral ecosystem (Ecological Law) – and you ought to preserve the integrity of the ecosystem (Antecedent Moral Ought) – for the integral ecosystem has value (Ecosystemic Evaluation)" (Rolston, 1975, S. 61).

always be of the empty sort which a glass has for carrying water. It is often a pregnant fullness. In the energy throughput model, nature is indeed a carrier of value, but just as it is also objectively a carrier of energy and of life" (Rolston, 1982, S. 143). Rolston is indeed balancing in this account the reference to the *presence* of values (or their ontological characteristics) independently of valuers and *valuers' act* of conferring values. In fact, like many others, the author is trying to make sense of how is it that values are somehow (ontologically) *founded* and yet they are dependent on valuers' epistemological exercise (indeed, it is the goal of the approach being introduced presently to capture this phenomenon by differentiating ontological and epistemological perspectives, where the present chapter focuses on the latter, while the former will be outlined in chapter 4).

Nevertheless, the quote should show how statements such as "carry value" that refer to the process of formulating, or producing values, as an *ontological* one, are inaccurate. Values may have certain relations to ontology, or ontological phenomena captured by facts (as will be explored in chapter 4), but they are not produced in ontological processes. They are produced in epistemological processes that are undertaken by valuers. This, in other words, is precisely the characteristic that pertains to the logical and epistemological nature and function of values. The logical and epistemologically-relevant delineation of fact and value is vital because it enables an appropriate account of the process of producing values and norms.

It should go without saying that an equally inaccurate account of the fact-value relation is offered by the idea of "merging" of fact and value, as promoted by Putnam (2002) or Fuller (1958) (for a more precise analysis of Fuller, see 5.1.1). The term "merging" perhaps does not literally imply that values are ontologically produced, as in the statement that facts "carry values" (Rolston, 1982), or that they are "discovered simultaneously" (Rolston, 1975). Nevertheless, it is a notoriously unprecise characterisation that tells the reader nothing about what specifically the relation between facts and values is, what does it mean that they are "merged" and why are they "merged".

In order to emphasise how different types of statements are present in relation to each other, it may be useful to return to an example discussed previously. The factual and value-neutral statement "smoking is deleterious to one's health" bases purely on biological facts regarding human health. It is a scientific statement. Smoking is deleterious to human health because it leads to diseases and is detrimental to survival, whereas survival is a *biological end* of organisms. This is a purely factual statement that does not involve values or norms; it refers to

facts about biology. It can be clearly differentiated from the evaluative/normative statement "smoking is bad".

The evaluative/normative statement that "smoking is bad" involves values and can only be produced by a valuing agent. An agent *embraces* the fact that smoking is deleterious to one's health *because* they value health (and health supports life while life is fundamentally valuable– intrinsically and instrumentally). It is a *conclusion* that has been produced in a reasoning process based on the factual statement that "smoking is deleterious to one's health" and the evaluative statement that "I value my health", with addition of reasons referring to the fundamental value of live (we value biological facts, such as whatever helps us pursue better health, due to our embedment in nature and the value of life). It is another formulation of the prescriptive normative statement "I should not smoke". In this case, the agent clearly embraces the fact and, in effect, the fact becomes aligned with the value: smoking is deleterious to health and, because the agent values health, she or he *considers* smoking bad. Such normative conclusions may give the impression that the fact that smoking is deleterious for health carries a value that smoking is bad, or that they are "discovered simultaneously" (Rolston, 1975). However, norms do not just "appear" with facts – they require an agent. To state that the two are "aligned", as opposed to "merged" is more appropriate as it helps respect a differentiation between them while recognizing their "agreement" – or valuer's agreement with the biological design.

In order to respect this logical differentiation between different types of statements, it may be suggested to reserve typical evaluative terms such as "good" or "bad" for actual evaluative and normative contexts. However, the source of the confusion lies in the fact that we notoriously apply evaluative and normative terms in descriptions of nature. We tend to say that smoking is *bad* from the biological, evolutionary point of view. In everyday life, we actually do not really neatly differentiate between referring to the laws of nature and to our evaluative perception of those laws of nature. In such statements, as a fundamental standard against which this evaluation is made, one merges the biological end of survival with one own's value of survival. It is a different meaning of "bad", reminiscent of the "ontological good" that is referred to by Orrego (2004). This refers to "events (regular of otherwise) that are 'good' (ontologically) or 'natural' for the being concerned from those that are not. Needless to say, it is good for a lion to devour a zebra (and 'bad' for the zebra). It is also true that lions regularly devour zebras and not vice versa. This empirical knowledge is what enables one to determine the nature of lions and zebras, and to know that zebras are 'natural' components in lions' diets." (Orrego, 2004, S.

293). And just as the "classical theory draws a clear distinction between ontological good pertaining to all that is, and moral good, pertaining to free action" (Orrego, 2004, S. 292), so the use of "good" and "bad" differs. ("Similarly, it does not confuse the use of such expressions as 'should' or 'law' in a normative sense, with their use, by analogy, in a descriptive sense" (Orrego, 2004, S. 292)). We may attach value to the purposeful design of nature and even describe it from our evaluative perspective using words such as "good" or "bad". However, nature would exist and function in exactly the same purposeful manner, if valuing agents were not present and would not attach values.

For analytical purposes in philosophy, we would benefit from using different terms to depict biological facts and purposes with our values and our purposes as we do in everyday life (this will be argued further in chapter 5). A differentiation between factual and normative statements highlights that values *become attached* to facts and that facts are driven by completely different laws. This may help to avoid the conflicts and objections to the statements offered by Orrego (2004), such as those forwarded by Hart (1958). Moreover, simple dualistic and anti-dualistic statements and some entire theories or positions simplify the complexity of the fact-value relation. As was already shown in the case of the separation thesis, terms such as connection, separation, contain, carry, merged, etc. are quire imprecise as they tend to be used in an absolute manner, without differentiating ways of understanding a problem. It is quite difficult to convey the subtle differences in the relation of fact and value with one-dimensional statements.

The issue concerning the formulation of the relation between phenomena characterised by factual elements and phenomena characterised by evaluative and normative elements will be highlighted and discussed also in the context of purpose in chapter 5. We shall return to this problem in the context of not only single statements such as that of Rolston, but entire theories that may be understood to promote inaccurate account that does not respect the logical and epistemological differences between facts and values. The points noted in the present section will be further elaborated in sections 5.1 and 5.2, particularly with reference to authors such as Fuller (1958), Ruse (2017) or Foot (2001).

In fact, such an inaccurate conflation is a general problem of Ruse's positions. As will be discussed in chapters 5 and 6, the author's position is rather inconsistent due to equating biological functions and biological purpose with values and human purposeful actions which is striking against his projectionist understanding of values. This consideration about epistemic transparency would *almost* also apply to Foot's theory (2001). Foot's concept involves the following "'natural' goodness, as I define it, which is attributable only to living things

themselves and to their parts, characteristics, and operations, is intrinsic or 'autonomous' goodness in that it depends directly on the relation of an individual to the 'life form' of its species " (2001, S. 26-27). The central feature of Foot's theory is that she *argues* that one *should* perceive (in the human case, at least to a certain extent) the evaluative/normative type of "goodness" with the biological one. Foot does not confuse them, but she argues that it *should* be the case to perceive them as merged. She believes that it is correct to think of biological predispositions and functions in terms of values and vice versa, even if we cannot literally say that non-human organisms value of set purposes in as conscious manner as humans ("Plants grow upwards in order to get to the light, but it is fanciful to say that that is what my honeysuckle is trying to do or that that is 'its end'. Migrating birds flying off in order to reach the southern insects do not have this as their end or purpose even though it could be said to be the end or purpose of the operation) (2001, S. 31-32). For example, we can think of sunlight being valuable for flowers, *as if they valued like us* (instead of stating that photosynthesis is a biological *function* of plants). Foot's statements go beyond being of only epistemological character. It is not that we *think* of values or functions in this way, Foot believes that this is the actual account of we should think about such things and how they are in reality. Thus, one cannot argue with Foot that she should maintain the separation between agent's normativity and "natural normativity" *for epistemological purposes*. However, one can, and should, argue against her theory because such an account of ontology is simply wrong and not confirmed empirically (as pointed out, particularly, by Fitzpatrick (2000)). The statements of both Foot and Ruse will be further addressed in sections 5.2.2 and 5.2.3 respectively.

3.3.4.3.1 Delineation between evaluative and normative statements

In order to fully embrace the epistemic transparency which contributes to clarifying the is-ought and the fact-value problem, one should highlight that sometimes it is even useful to pay attention to the differentiation between concepts as closely related as values and norms. Analysis of Searle's and Finnis' positions demonstrate that these two concepts are often conflated. In their analyses, both philosophers collapse values and norms into the term "evaluative statements". This conflation is reflected also in the following statement of Finnis: "But one who, thus knowing the possibility of attaining truth, is enabled thereby to grasp the value of that possible object and attainment is not inferring the value from the possibility. No such inference is possible. No value can be deduced or otherwise inferred from a fact or set of facts" (Finnis, 1980-1981, S. 267).

Considering the reasoning examples analysed above (3.3.3), evaluative statements are premises that reflect what is valued, while norms are conclusions that guide action, *based on* values. This is very much in line with the difference outlined in chapter 2 (2.1.2). The two are closely related and certainly sometimes the differences between them are negligible. While a norm necessarily contains a value, it is distinguished form a value with the fact that it captures the value in a context of the value's relation to actions or other values. This differentiation proved useful in the analysis of examples involving formulation of norms based on facts because it enabled to distinguish evaluative premises from normative conclusions and thereby capture the derivation. At the same time, simple norms that state what is a good equal in their formulation to formulations of values, given that values denote what is good. For example, "life is good" reflects both a norm and a value. However "life is good and should be pursued through a healthy lifestyle" is a norm that has at its core the value of life but frames the pursuit of this value in a further context (that of promoting a healthy lifestyle in order to achieve the value).

In contrast to Finnis' (1980) statement, in the examples considered above, it is norms, not values, that are derived. Despite this, values can "automatically" follow derivations of norms because they are implicitly contained in the norms. Due to this close relation between values and norms, by justifying or reasoning about a norm, one also implicitly and indirectly reasons about the values contained in that norm. If an agent states: "I am hungry, therefore I should eat", the value is either implicit, *or* the derivation implies a value; if the agent says "I should eat", then it follows that they value eating. It would be rather peculiar to suggest that the derivation would be as follows "I am hungry, therefore I value eating". This is what was observed also in the examples described above. Certain values which are embraced by the subject based on objective evaluation are implicitly hidden in the normative conclusions.

This implicit presence of certain premises was also discussed above, with regards to Finnis' understanding of the is-ought problem. By justifying a norm, one also justifies a value, although this does not necessarily work the other way around. There may be many norms that refer to one value, although in distinct ways. Moreover, one can reason only about values, such as about values that are worth pursuing, rather than about how these values should be pursued (previously outlined as difference between goal-setting and goal-pursuit). Conclusions, then, would refer to values alone and simple norms, such as the value of health or the norm "health is good", rather than to any further norms that provide contexts to the pursuit of this value. Statements of value, evaluative statements, reflect what is valuable; normative statements go a

step further and guide what should be done in different contexts but with the assumption of the value. The delineation between values and norms highlights the step that is undertaken from an evaluative premise to a normative conclusion. As examples above show, normative conclusions contain references to not only values but also to facts. Norms can be simple, but they can also be complex and contain many references and assumption. Finnis' (1980) illusion of self-evidence of norms may arise precisely from ignoring this difference between values and norms and overlooking the fact that norms are conclusions build on several premises.

The delineation between values and norms is important but it can be justifiably neglected in certain cases given the close relation of values and norms. This is unlike the delineation between, on the one hand, facts and, on the other hand, values and norms which is particularly important and necessary to maintain in any context. However, maintaining the differentiation between facts and values as well as norms altogether helps highlight the role of autonomous and rational agent. Thus, it also helps to emphasise that a move between a fact and a norm, an *is* and an *ought*, is *made* by an agent. It is the agent that *embraces* facts as valued, with or without reasons. This differentiation increases epistemic clarity with regards to is-ought derivations as it shows not only the necessity of bridging premises such as values and reasons but also that such premises are usually present.

3.4 Conclusion

The is-ought issue is an important interpretation of the fact-value problem from the epistemological perspective. Even though these are not the same issues, they are often conflated, and the is-ought problem has become associated with a dualism between fact and value. Dualism is a concept which promotes an absolute break between fact and value, regardless of different perspectives from which one may look at the relation of two concepts. However, the problem of not deriving norms from facts, *oughts* from *ises* (without a justification), is an epistemological problem pertaining to the fact-value relation. It is of epistemological nature, because it refers to the way agents reason, formulate and justify norms. It concerns the fact-value issue, despite a reference to norms, because norms necessarily involve values. Admittedly, however, even though it should not be understood dualistically, the is-ought problem underlines important logical and epistemological delineation of facts, values and norms. Once deeply-rooted dualistic assumptions are removed, its proper interpretation highlights correct reasoning involving justified formulations of norms that involve evaluative and factual statements.

A transparent logical differentiation between statements of facts and statements of values (and norms) as types of concepts (1). Facts and values, factual and evaluative (and normative) statements have different functions in reasoning processes (2). They have asymmetrical relationship to producing norms in reasoning processes, as showed in chapter 3, 3.3 – facts always lead to norms with involvement of values and/or reasons. These types of statements also differ with regards to epistemological processes in which they are produced (formulated) (3). Values and norms are formulated by an agent while facts are discovered. These various differences which are of logical and epistemological nature, or can be referred to as epistemologically-relevant, are promoted by philosophers such as Searle (1964). At the same time, this differentiation helps to capture the fact that values aligned with biological functions and predispositions are *not an accident.* As it is acknowledged that they are produced in different epistemological processes, it is highlighted that values are a choice of a valuer.

In consequence, this differentiation allows to observe that the *reference to facts* is an autonomous and often rational (often implicitly) justified epistemological exercise of the valuing agent. Such reference to facts leads the valuer to conclude that certain values are valuable and embrace them as such. It is the valuer who autonomously *embraces* certain facts, such as the presence of biological functions and predispositions, and values them. Facts do not become values "on their own", nor are values "given" externally. Even when valuers act according to their predispositions, it is the autonomous reasoning of a valuer that can lead them to act according to certain predispositions[29]. In such cases where valuers' choice, perhaps supplemented by reason, is aligned with biological predispositions or with the biological design, one can speak of alignment of fact and values.

The conclusion from the analysis enables to confirm a non-dualistic interpretation of the is-ought problem, according to which derivations are possible with appropriate bridging premises. While factual, evaluative and normative statements are indeed logically and epistemologically distinct, a combination of such elements is possible. In agents' reasoning processes that lead to formulation of norms, different types of factual and evaluative statements are linked by reasons. Once the reasoning processes are captured with reference to factual, evaluative, normative statements as premises and conclusion, the phenomenon of "alignment" between and the agent's role in actualising this alignment by referring to biological facts is more understandable. This phenomenon not only allows to capture what happens epistemologically; it also reveals the ontological connection between facts and values involved. We can explore

[29] This is not to say that valuers` choices are always driven by reason as our rational capacities are fallible.

it by inquiring about the reasons for referring to biological facts in cases such as those described above which point one in the direction of our embedment in nature due to the fundamental value of life. This ontological relation will be explored in the next chapter (chapter 4); it helps to understand the reasons and values which refer to facts and have normative implications. As such, it can help explain *how and why* values (and norms) are related to objects. Indeed, based on this, addressing the challenge for objective values discussed in chapter 2 will be provided in chapter 6.

Precisely such cases of "alignment" lead philosophers to conflate statements and concepts defined by facts, such as nature or biological design, with statements and concepts characterised by values and reasoning. This is evident in propositions that facts and values are "merged" (Putnam, 2002) or (Fuller, 1958), nature or natural facts "carry" values (Rolston, 1982), or facts and values or are "discovered simultaneously" (Rolston, 1975). In consequence, this leads other philosophers to believe that theories that recognize references to nature undermine human autonomy as human action and morality is perceived from the perspective of biology. Also due to this closeness of nature and biology to our autonomous acting, in everyday life we tend to speak about nature in our evaluative terms, assigning them values *as if it valued like us*. Philippa Foot's theory (2001), although recognising certain differences in intentionality between human and the rest of nature, is characterised by the view that action and valuing in all living beings should be perceived from the perspective of their natural characteristics. There are two aspects of this conflation between references to biology and references to human autonomous action that includes reasoning and valuing. This problem will be further elaborated in chapter 5 after chapter 4 investigates why references to nature take place.

4 The ontological perspective: the embedment in nature from descriptive and normative perspective

Following chapter 3, it should be clearer that, as an epistemological exercise, agents refer to nature, including biological facts. Such references can be valid in terms of reasoning, as the analysis of the is-ought thesis showed. Chapter 3, by emphasising logical and epistemological distinctions between facts and values, focused on *how* such epistemological exercises of making references take place. However, these discussions did not answer the question of *why* they take place, i.e. why agents make such references to nature, why do choose and actualise the alignment between facts, values and norms. A more complete answer to this question goes

beyond the epistemological process and focuses on the patterns and characteristics characterising biological facts. The goal of chapter 4 is to account in more depth for *why* such references to nature are made which requires examining the ontological characteristics that are responsible for this phenomenon. It was already outlined that this reference can be attributed to the fundamental value of life which "grounds" us in the biological framework and warrants references to nature – a phenomenon that is referred to as "embedment in nature". Valuers' embedment in nature is an issue of ontological relevance in the context of the fact-value relation because it is highly relevant to explaining how values and facts are related in terms of their content, what explains their fundamental characteristics.

Embedment in nature has to do with the fact that we value life which is why we respect some biological functions and follow some biological predispositions. It also has to do with the fact that human biological functioning is entirely dependent on the biological design. This understanding of our embedment in nature is a subject-matter of science. The scientific account is another perspective from which it can be investigated. Analysing our embedment in nature from this perspective, *demonstrates* how deeply we are grounded in nature. By providing both an overall scientific framework and specific evidence, it *confirms* the evolutionary biological design that anchors humans in the natural world and is the reason why we refer to nature. Indeed, our biological functions and predispositions concern not only our basic functions (e.g. eating, sleeping) but also functions relating to our interactions with others (e.g. caring for children). It is even argued by scientists, as is accepted by many philosophers, that human advanced mental capacities – or "mind" philosophically – is a biological function (for example, Ruse (2018), Ruse (1984) or Wilson (1987)).

This deep grounding of human nature in biology, explored scientifically, has prompted many philosophers, such as Ruse (2017) or Foot (2001), to link biology with values (or vice versa). Many philosophers appeal to these scientific findings in philosophy. As Foot believes, "the grounding of a moral argument is ultimately in facts about human life" (2001, S. 24) where facts about human life concern human nature as specific to human species and in no different manner than the nature of species of a lion is specific to lions' behaviour. In fact, not only Ruse and Foot are strong advocates of linking human valuing and normativity to biology. Many other philosophers (Fuller (1964), Putnam (2002), Callicott (2008), Rolston (1982) etc.) recognise these parallels and our relation to nature and biology. Moreover, there are entire moral theories, such as natural law theory, that build on this phenomenon. Such recognition is present not only

as part of Aristotle's heritage but is also recognized by followers of Kant, Kant himself (2012) as well as even David Hume (2011). Even those who oppose references to nature in natural law theory, such as Hart, recognise a certain relevance of nature to human autonomous valuing and reasoning. Finally, authors such as Woodfield (1976) or Fitzpatrick (2000) recognise parallels between nature and human to a large extent and in their own terms, although they criticise many other authors who draw a similar link.

Except for explicit proponents of dualism, there are few philosophers who deny that nature is *in some way* relevant to valuing and normativity. However, authors differ greatly in their account of the extent to which references to nature are relevant as it is a very risky topic. They also differ with regards to the extent to which they engage with explanations of this phenomenon at the meta-ethical level. Arguing for a relation between biology and values, normativity, is a move that has to be carried out very carefully in order to be resilient to objections such as Hart's criticism of natural law theory (1961). Indeed, it will be argued that making references to biology, following recognising certain parallels between valuing and natural design, authors such as Ruse or Foot do not sufficiently engage into understanding how these parallels should be interpreted. This is because inputs and considerations concerning scientific facts differ from evaluative and normative considerations. One cannot equate them, but it is necessary to qualify how one type of input relates to the other. How are facts about human nature and biology relevant to (moral) normativity and valuing? Why are authors making references to such empirical evidence? It clearly cannot be said that just because we *are* embedded in nature, in the sense that sciences show our biological and evolutionary heritage, means that biology *should* define our values.

The lack of such clear meta-ethical qualifications (or insufficient qualifications) about how empirical evidence is relevant in normative exercises in Ruse or Foot leads to objections to their theories which are in the vein of the shortcomings pointed out by Hart's (1961). As a result, as will be discussed in chapter 5, their positions are linked with a lack of satisfactory recognition of the logical and epistemological differences between facts and values as well as factual and evaluative phenomena. They are in the vein of Hart's criticism in so far as they fail to highlight that valuing and normativity, even if aligned with biological design, results from agents' act of valuing.

Before such objections can be fully developed in chapter 5, it is necessary, in the present chapter, to fill the gap in elaborating how such empirical evidence is relevant to evaluative and

normative exercises. In an attempt to start afresh, the chapter will outline empirical evidence stemming from studies of evolution (referred to by Ruse (2017) and Foot (2001)) and along this outline independently discuss (i.e. with reference only to empirical facts, rather than their philosophical interpretations) their interpretation and normative relevance. Central to this discussion will be a recognition of two perspectives from which one can look at the issue: the descriptive and the normative.

At the same time, the examination of empirical evidence about human beings and setting a framework for analysing its relevance to valuing and normativity should be interpreted as the analysis of ontological relations between biological facts and values. This is because it concerns fundamental facts about what human beings and their embedment in nature and whether and how these facts are related to how we value, with reference to descriptive and normative understandings of this phenomenon. From this perspective, the relation of fact and value should be interpreted as ontological as it explains why we do, and perhaps even should, make references to biological facts. This perspective concerns the relation manifested in the content of facts and values, as opposed to the epistemological perspective which focuses on their characteristic as types of statements, how they are produced and what are their functions in reasoning processes.

The chapter begins with the differentiation concerning descriptive and normative perspectives on embedment in nature, i.e. the relevance of biology to valuing and normative exercises. It will be briefly outlined in 4.1, further elaborated in 4.2.1 with regards to evolution theory specifically, and followed through in the remaining sections. Each perspective offers a distinct type of statement and interpretation of why references to nature take place in valuing and normativity. The framework of the evolution theory which accounts for our embedment in nature is outlined in 4.2 and interpreted in 4.2.1. Subsequently, evidence stemming from evolutionary sciences are discussed (presented and interpreted) in 4.3 and 4.4. The differentiation between the *evolutionary framework* (i.e. the hypotheses about evolution and biological design, mostly discussed in 4.2) and *evolutionary evidence* (i.e. evidence supporting evolutionary hypotheses, such as about biological predispositions, mostly discussed in 4.4) is beneficial to maintain. This is because evolutionary framework, understood descriptively, is also linked to why we make references to nature, normatively. In contrast, evolutionary evidence should be understood as a manifestation and confirmation of the evolutionary framework.

The bulk of the chapter is consumed by the presentation and interpretation of descriptive, scientific framework and evidence about human nature and biological predispositions. References to such evidence are very prominent in the works of particularly Ruse (2017) (or Ruse (1984)). However, they similar examples of parallels between biology and valuing are present in Foot (2001), Finnis (1980) and even Hart (1961) (for a discussion of the two latter authors, see 4.5). By discussing the evolutionary framework as well as evolutionary evidence from sociobiology and animal behaviourism about biological predispositions to evaluative and normative conceptions and actions, the analysis attempts to make two points. First, it demonstrates (descriptively) the deep embedment in nature in scientific terms. It is relevant as a demonstration of the ontological relation between fact and value because it provides evidence for the evolutionary biological framework that is the reason why we refer to biology. Secondly, the discussion offers a blueprint for how such inputs should be interpreted which is useful for contrasting references to such evolutionary, biological or natural facts by other authors. Thus, in general, the presentation of such empirical statements is accompanied by their interpretation. Moreover, in order to put these discussions in context, 4.2 is interwoven with points of references to philosophers (see 4.2.1 and 4.5) that will be developed in 5.2. Section 4.6 examines the *normative* understanding of the phenomenon of our embedment in nature which is an important feature complementing the understanding of the ontological relation of fact and value. The normative account concerns reasons why we consider biology relevant to valuing and normativity, as opposed to the descriptive account which describes our biological heritage and biological tendencies. In other words, it investigates why valuing subjects refer to objects, as seen from the perspective of objective values discussed in 2.2.3.

4.1 Outlining the descriptive and normative understanding of embedment in nature

The answer to *why* we make references to nature involves examining our evolutionary *embedment in nature* that shows the relevance of biology to our valuing. The fact that we can look at this phenomenon as a scientific phenomenon and as a reason that warrants references to nature suggests that the two perspectives to investigate it can be understood as *descriptive* and *normative*. The descriptive approach relies not on arguments but on empirical findings and evidence of manifestations that *demonstrate* the extent of our embedment in nature. It is the most precise and accurate source of knowledge about biology. This descriptive account is very helpful in *observing* the extensive parallels between biology and human action that are recognised by so many authors. Furthermore, discussing the evidence will help capture the

nature of the statements made by this descriptive account. This will facilitate placing it in the appropriate context *against* normative analysis.

The descriptive account *is no reason* why we should consider nature relevant to values and normativity in moral contexts. The reason for considering it relevant is captured by the *normative* account. The normative perspective concerns *providing reasons about embracing (or not) of this embedment by valuing (or not) of biological facts, functions and predispositions*. The normative perspective focuses on the reasoning of the agent that leads them to making references to nature from the epistemological perspective, as discussed in chapter 3. The role of reasoning is to help the agent decide whether and how embedment in nature is *valuable*, such as whether it is rational to value biological functions or embrace biological predispositions. The normative perspective accounts not only for why agents choose to embrace biological facts, as was the case in models discussed in 3.3.3, but also for why they choose to reject them. In effect, this perspective accounts for why subjects make references to nature and, thus, is relevant to understanding of objective values, as will be concluded in chapter 6, 6.3.

Both the descriptive and the normative perspectives refer to the phenomenon of embedment in nature, although in different ways. In contrast to the normative, the descriptive account involves no reasoning, only descriptions of the overall framework and its specific evidence. The descriptive approach is concerned only with scientific facts. Reference to purpose in this context concerns factual account of biological design and biological functions. The normative approach explains purposeful human valuing and normative exercises which may involve references to biological facts.

Most of the present chapter will be committed to outlining embedment in nature from the descriptive perspective. Making the major points about our biological heritage transparent in terms of their relevance to valuing and normativity and types of statements they deliver should account for how such facts should be interpreted and delineated from the normative perspective. This is highly relevant as it should help clarify how references to empirical evidence which are popular among authors such as Foot (2001) or Ruse (2017) should be understood. The subsequent discussion of the normative understanding of our embedment in nature will serve to place the descriptions in the appropriate context against the role of human autonomous reasoning and valuing. Thus, it is essential to bear in mind that any discussion of

empirical evidence is only of descriptive nature and carries no normative implications unless such implications are explicitly argued for.

4.2 The descriptive account of embedment in nature: purposeful evolutionary *framework* explaining biological design

The scientific framework that reliably provides evidence for the embedment in nature of humans and is linked to why chose to make references to nature, is provided by evolution theory. As it accounts for the nature of the natural world and defines the characteristics of its elements, in philosophical terms, it has ontological character. The synthetic evolution theory, combining Darwin's findings as well as more sophisticated methods of genetical analyses, accounts for how we, humans but also all other species, came about and how each feature of our nature can be explained. The reconciliation of Darwin's findings in the "Origin of Species" (1859) and modern theory of heredity provides a more complete account of evolution and natural selection is known as "synthetic theory of evolution" or "Neo-Darwinism" (Ruse, 2015).

Evolution theory accounts for biological facts such as the *presence* of biological functions and predispositions as well as the *knowledge* about them, i.e. knowledge about what contributes to their proper biological functioning and what is detrimental to them. Both these types of facts are explained in terms of purposeful evolutionary framework. Biological functions and biological predispositions which characterise organisms, including humans, are referred to as evolutionary adaptations. Evolution theory offers not only a theory that helps explain our embedment in nature but also specific evidence about its manifestations. All these types of input from evolution studies are referred to by authors such as Ruse (2017) and Foot (2001) which is why it should be briefly outlined it here. The chapter touches upon immensely extensive and difficult topics not only in philosophy but also in science. In order to make sense of this inquiry, it is necessary to remain at a fairly general level.

Evolutionary statements account for all characteristics of human nature, both those we share with other animals and those specific for humans. Evolution explains the origins of human nature, including all kinds of physical and mental traits as adaptations (where these are understood as manifestations of this framework). This involves *predispositions*, including predispositions to certain evaluative and normative conceptions, which are often, and confusingly, referred to as values and morality by authors such as Owen Wilson (2004) or Michael Ruse (2017). Within this framework, evolution theory can also explain the presence of rational capacities of human as biological functions, which can be also perceived as natural

to human species. As Foot states, the presence of reason and rational considerations is what distinguishes rational human species from "sub-rational" species (2001).

In explaining the biological aspect of human nature, we often understand some elements of human nature as shared with other organisms, and other traits as specifically human, differentiating us from other species. Despite this, evolution is understood to account for the origin and biological function of *all* traits of human nature. This is precisely what makes evolution theory very controversial. Evolution theory perceives humans as one among many species, which means its hypothesis are generally equally applicable to humans. As Ruse and Wilson observe, it is undisputed that "human evolution appears to conform entirely to the modern synthesis of evolutionary theory as just stated. We know now that human ancestors broke from a common line with the great apes as recently as six or seven million years ago, and that at the biochemical level we are today closer relatives of the chimpanzees than the chimpanzees are of gorillas. Furthermore, all that we know about human fossil history, as well as variation in genes and chromosomes among individuals and the key events in the embryonic assembly of the nervous system, is consistent with the prevailing view that natural selection has served as the principal agent in the origin of humanity" (Ruse & Wilson, 1986, S. 176).
Indeed, evolutionists argue that they can entirely account for the origin of human nature and each of its traits *with reference* to the ultimate biological end (hence its purposeful character). This means that evolution theory *describes* the overall framework of our embedment in nature in a general way, which then is applied to specific explanations about each evolutionary trait (i.e. biological functions and biological predispositions). In such way, evolution accounts for advanced mental capacities as an evolutionary trait.
Thus, the evolutionary framework is a purposeful framework because there is an ultimate biological purpose[30] of each biological trait, function or predisposition: survival and reproduction of species. Evolutionary explanations, general or specific, are always made with reference to purpose (ultimate biological end) because it is a purposeful framework. From this perspective, every trait of an organism is an adaptation to increase chances of reproduction and survival given the environment. The development of such traits can be traced through a historical examination. In other words, this means that all traits and adaptations of organisms have *functional* purposes subordinated to survival and reproduction of species.

[30] Biological purpose is otherwise referred to as biological end.

It is scientifically undisputed that species (including humans) have evolved alongside other species from shared ancestor species, according to the theory proposed by Darwin. In a rough generalisation, the mechanism of evolution discovered by Darwin, known as natural selection, develops adaptations in organisms that make them more fit to survive and reproduce. The development of adaptations depends on the environment of organisms because organisms have different needs in different environments. The advantages put in place by these adaptations, which can be understood as all traits and characteristics of organisms, increase the survival chances of organisms. Given the limitation of resources, survival is a struggle between organisms which means that these adaptations are necessary from the point of view of biology (Ruse, 2015). In effect, the changes made on the organisms by natural selection have, over time, resulted in a variety of species[31]. This more general framework is supplemented by specific knowledge about how these changes *actually* come about in biology; i.e. with the modern theory of heredity which explains how genes are passed on (Ruse, 1976).

While genetic set-up is known to have an underlying responsibility for some traits, it is not correct to say that genes *cause* a trait. Genes may be the underlying coding material of traits, but their actual manifestation depends on the environment (Ruse, 1979). The evolutionary interplay between genes and environment results in a variety of adaptations and modes of survival of organism and is reflected in the variety of species. As Ruse states, "natural selection is opportunistic. What works in one situation does not necessarily work in another. There is no reason to expect a forward direction to evolution, even one interrupted by reversals and sidestepping" (Ruse, 2017, S. 101). This explains why species have developed and specialized in various directions. It is also the reason why humans have perfected their mental capacities and why we should not expect the same path of evolution for other species. There are fundamental similarities between species due to a certain extent of common evolutionary heritage and shared global environment; for example, all need to breath. However, species become specialized to fulfil these needs in their own habitats, which partly explains their differences. For example, aquatic animals usually have gills (branchia) while terrestrial animals have lungs for breathing.

This brief overview is based on solid empirical evidence concerning evolutionary embedment in nature of human beings, as well as our relation to other species. Since this scientific framework is said to account for all features of our human nature, including advanced mental

[31] There are exceptions, vestigials, i.e. traits which do not have, or have lost, their functions. Nevertheless, these do not defy Darwin's theory and are accounted for within its framework (Ruse, 2017)

capacities, it can be expected to be relevant to how we tend to act, behave or value. This, in turn, may help explain strong parallels between biological explanations and our values, as will be explored gradually in the next sections.

As evolution theory links specific traits (adaptations) with developments at the genetic level, the relatively new study of sociobiology applies this approach to investigating the relations between genes and *social* traits, i.e. social behaviour, both in animals and in humans. Sociobiology can be understood as an extension of evolutionary theory: development of social and cultural behaviour is perceived through the lenses of population genetics which are linked to adaptive adjustments. The idea is that "human social behavior can be evaluated (…) first by comparison with the systems of other species and then, with far greater difficulty and ambiguity, by studies of variation within species" (Wilson, 1977, S. 131). It is worth noting that Wilson's idea of extension of evolutionary theory into sociobiology was not completely new: "Darwin himself always thought that such [social] behavior was part and parcel of the evolutionary picture, but he recognized that it was extremely difficult to study." (Ruse, 2015, S. 683). Ruse also notes that Darwin himself was committed to the idea of applying the evolutionary theory to humans and "intended to treat man on a par with other animals" (1980, S. 28). Social behaviour is also studied in animals by observation of their behaviour. Within the evolutionary context, it is interesting to compare social behaviour of animals and humans in order to understand their similarities in terms of social, evaluative and normative behaviour.

Applied to humans, evolution sciences are controversial because they make statements about all aspects of human nature. They tend to be perceived as making normative statements and/or undermining the role of advanced mental capacities of humans. As Ruse states, the idea of treating humans "on par with animals" is often met with defensive responses (1979). This problem is especially pronounced in the case of sociobiology. There are several reasons for this. Among others, sociobiologists and other evolution scientists are often accused of being careless in equating human behaviour with animal behaviour and in linking human behaviour to biological predispositions without recognizing the autonomy and rationality of human choice (Fitzpatrick, 2000). This is also a problem which may affect animal behaviourists such as de Waal (2006) (as argued in 4.3.1). Striking the delicate balance on this issue is a quality that is not necessarily met by every scientist (or philosopher).

Indeed, the differentiation between a biological predisposition and autonomous choice in embracing or rejecting it is the central feature of the approach introduced in this work. It will be applied and discussed in the analysis of examples of scientific evidence from sociobiology (4.4) and study of animal behaviour (4.3.1). This should provide arguments that equating

tendencies with actual behaviour is not a necessary feature of the study of sociobiology as such. However, making this differentiation is a responsibility of both scientists and philosophers who discuss such evidence. Overseeing the fact that sociobiological statements are not necessarily linked with normative statements is an equally valid problem. In short, this should shows that the differentiation between descriptive and normative perspectives on our evolutionary background should be applied by scientists and philosophers alike who discuss its relevance to human autonomous choice, valuing and normativity.

This point also applies to statements that sociobiology suggests genetic determinism (Fitzpatrick, 2000). Critics assert that sociobiology leads to justification of racism, sexism and similar vices (Ruse, 1976). A simple objection to such statements is that even if sociobiology claimed that racism or sexism or other morally questionable tendencies were genetically determined, such findings would not stand in the way of berating these tendencies and prescribing different action. Indeed, being aware of autonomy of human choice and our capacity to act against natural tendencies, there would be no reason to believe that we cannot escape being racist or sexist even if we did have such biological predispositions. It is perhaps important to once again emphasise that evolutionary studies such as sociobiology do not claim to explain social behaviour in its entirely, but only their *tendencies* linked to evolutionary biological functions and design.

Basic facts about evolution, which are a sufficient input for purposes of this work, remain essentially undisputed (Ruse & Wilson, 1986). Evolution theory holds scientific explanations for different biological functions as adaptations of organisms in the light of the ultimate biological end of survival and reproduction. As this applies to both physical and mental adaptations (the latter valid in case of humans), it also accounts for advanced mental capacities as evolutionary adaptations with a function serving the biological end. With this scientific background in mind, it is much easier to understand the (descriptive in nature) relevance of evolution theory to understanding our embedment in nature: how and why biology *predisposes* (but not defines) our values and moral normative conceptions. Evolution theory treats them as mental functions and predispositions and explains how and why such *predispositions and tendencies* came about. The science provides both a general framework and, in many cases, specific evidence to account for this.

The presence of such evolutionary framework and evidence, even in the descriptive manner, shows parallels between biology. Evolution theory shows that we are strongly embedded in the evolutionary framework, to the extent that it predisposes evaluative and normative conceptions and behaviours. It is an important *fact* that we have functions and predispositions and that we

embrace these predispositions even when we chose autonomously and rationally. These facts about our embedment in nature tempt philosophers to argue that nature and biology is relevant to valuing and normativity. Nevertheless, it is vital to be clear about the descriptive nature of such statements as well as how precisely they should be interpreted and how they are relevant to accounting for our valuing and normative exercises.

4.2.1 Interpreting the descriptive account of evolutionary framework: elaboration on the character of its statements

Having outlined the evolutionary framework that describes our embedment in nature, it is necessary to deepen the explanation concerning how its more specific statements (to be analysed in 4.3 and 4.4) should be understood in the context of this work. To that end, it is necessary to outline basic features of interpreting the above scientific inputs. The analysis of scientific framework and evidence about our embedment in biology, interwoven with accompanying commentaries of how such inputs should be interpreted according to descriptive and normative perspectives, serves two purposes. First, it helps to understand how such scientific framework and evidence (frequently referred to by philosophers) should be interpreted in philosophical context. Secondly, scientific evidence confirming evolution theory, underscores the evolutionary framework that defines the ontology of the natural world and, thus, is relevant to why we refer to nature. At the same time, by highlighting that this account offers only a descriptive account of the ontological relation of biological facts and values, and delineating it from the normative account, the epistemologically-relevant point about human autonomous choice is respected. In both cases, the consideration of the delineation of facts and values and phenomena characterised by them is highlighted, in line with the approach in chapter 3. Such an understanding of references to empirical facts about nature and biology allows to increase the meta-ethical understanding of references to nature.

As the central feature of the interpretation of such scientific statements, it should be highlighted that descriptive account does not make any statements about how we should exercise our biological traits for *our own purposes*. It refers to the *origin*, brought about by evolution, and *biological* purpose of these traits, functions and predispositions. The descriptive statements *do not* concern how and what values and purpose *we attach* to these traits, functions and predispositions. The descriptive scientific evolutionary account of the biological design should be entirely detached from the interpretations that agents attach to this design.

In the descriptive understanding, within the framework of its purposeful design, evolution equips us with biological predispositions that predispose our values and normative conceptions,

such as having an urge to eat but also perceiving incest as bad. We are predisposed towards them because they help us foster behaviours which are favourable from the point of view of evolutionary, biological purpose. These biologically predisposed conceptions may well be responsible for some of *our subjective states*. However, according to the logical and epistemological differentiations between fact and value, these predispositions are not values, unless they are embraced by an agent. Certainly, predispositions can be valued or not, we are not forced to embrace them. Owed to our autonomy and the capacity to rationally evaluate and decide, we can also reject them. Thus, it is important to remember that neither sociobiology nor studies of animal behaviour attempt to provide or justify any values or moral norms. Descriptive statements of these sciences are also not "automatically" linked to a provision of norms that guide and should guide human action. The talk of such norms and values can take place only with reference to the autonomous reasoning and choices of an agent.

We understand all biological traits (including functions and predispositions) because evolution theory provides the overall *purposeful* biological framework for accounting for the nature of species, their bodies, functions and predispositions. In line with this, the analysis of value predispositions can be gained particularly from sociobiology and study of animal behaviourists, such as primatology. The former investigates the biological causes of such predispositions, while the latter focuses on their behavioural manifestations. Both evolutionary sciences examine *social* behaviour as a manifestation of the evolutionary framework.

Social behaviour is an issue which is very relevant to the concepts of values and norms and, what follows, morality. Social behaviour is about behaving among others and, thus, is subject to moral considerations. We may *tend to* certain social behaviours as a result of certain biological evaluative and normative biases. In the descriptive sense, it concerns how we *tend to* behave among others; in the normative sense, it concerns reasoning about how we *should* behave among others. The latter considerations involve active employment of advanced mental capacities for purposes of reasoning.

Thus, in the descriptive manner, references to evolution theory provide an important background to understanding our biological characteristics and embedment in nature through our evolutionary heritage. Such background concerns not only the overall purposeful explanatory framework of the traits and characteristics of our species, where explanations of all traits are provided from the perspective of evolutionary purpose, as described above. Evolutionary sciences also provide evidence, or *manifestations*, of this framework which will be outlined in the upcoming sections. The analysis of evolutionary evidence accounts for certain value predispositions and *confirms* our embedment in nature.

Moreover, such biological predispositions to certain normative and evaluative conceptions are interesting because they can explain some *subjective states of a subject*: desires, passions, urges and natural inclinations. Subjective states, such as the urge to smoke or to prank somebody, are very often arbitrary, impulsive and self-evident. Some are good, while others are irrational. Indeed, we often fail to involve reasoning into valuing based on such immediate predispositions and unreflectively follow such subjective predispositions.

The fact that we tend to have such biological predispositions that are manifested in our subjective states, which may or may not be embraced by the agent, shows how strongly human is grounded in nature. The fact that we embrace these predispositions and functions is incidental, unless an explanation for *why* this takes place, from a normative point of view, is provided. Evolution theory can explain our biological design and account for much of our behaviour descriptively, as tendencies and predispositions. It does not tell us how we should value although its knowledge may provide some inputs to our reasoning.

The two approaches, descriptive and normative, are independent: we can engage in one without necessarily engaging in the other. Nevertheless, even though from a different perspective, they both are anchored in the same ontological framework of the natural world. Normative exercises can take place without collecting any knowledge about the descriptive evolutionary framework. Normative exercises usually refer to *manifestations* of this evolutionary origin. Manifestations, such as the *presence* of needs and urges based on biological functions and predispositions, are self-evident for agents. We do not eat because it is an evolutionary function but because we feel the urge to eat. However, further *knowledge about the presence and knowledge about these functions*, such as what contributes to them, can clearly help arrive at more informed conclusions. This is valid not only in the case of reasoning about *what* is valuable, i.e. in instances of goal-setting, where we understand certain tendencies as evolutionary predispositions and evaluate them as morally right or wrong (such as in the case of Nussbaum's anger (2016)). It is also valid in cases of goal-pursuit when agents can use knowledge about certain biological functions to further their goal, based on the value they attach to the biological functions (as in the case of smoking).

The kind of knowledge about biological functions and predispositions, as resulting from the study of evolution, can also be provided by related sciences such as biology, medicine, psychology, social anthropology, etc. These disciplines are in a similar way relevant to *more informed* derivations of norms from facts, in line with the example of cigarette-smoking. In that case, medicine provides knowledge about the biological functions according to which we can understand that smoking is deleterious to our health (and since we value health, we can

deduce that smoking is bad for us). Subsequently, we can attach different interpretations and values to these facts and use this knowledge respectively in the reasoning processes.

What makes discussion of evolution science so interesting, is the fact that it provides the global purposeful explanatory framework of our embedment in nature relevant for these sciences. Within its purposeful framework, it not only explains why we *have* certain functions and predispositions, why we refer to and embrace this functions due to our biological design, but it is a "meta-discipline" that accommodates all *knowledge*-generating studies of our bodies, functions and predispositions, such as biology, medicine, psychology, social anthropology. Evolution theory is the most appropriate reference with regards to the ontological relation of fact and value, precisely because it offers a framework for understanding our biological embedment, next to evidence about its manifestations. It explains the nature and characteristics of our functioning that is highly relevant to how we value and should value, as will be argued in this chapter.

Thus, attempting to understand such scientific statements as well as their relationship to our valuing is an interesting approach to capture the framework that makes biological facts relevant valuing and normativity from another perspective. This may increase the understanding of why referring to nature seems relevant to many and takes place so frequently. In this context, the descriptive-normative differentiation is particularly useful to attempt to highlight the importance of human autonomous valuing, despite the relevance of biology. Further, it helps evaluate the statements made by philosophers who promote the relevance of nature to valuing in one way or another. Although their positions differ, most of those authors, such as Ruse (2017), Foot (2001) or natural lawyers (Orrego (2004) and Finnis (1980)), observe the parallels between biology and our values. Ruse and Foot bind biological "goodness" with human goodness. In accounting for biological "goodness", from perspective of which they perceive human goodness, they both explicitly refer to evolution theory. For Foot this "goodness" applies to all living things and their shared natural background, such as biological functions and purposeful biological design that pertains to living things. As she states with regards to Michael Thompson, this is "the logical dependence of these descriptions on the nature of the species to which the individual belongs" (2001, S. 27). Also natural law theory draws parallels between nature (including human biology) and valuing and normativity, although it places reason at the forefront. In effect, according to natural law theory, what is good for human is what is natural as long as it is rational. The difference to Ruse and Foot is that natural law theory does not explicitly refer to evolution theory to explain the background of what is natural.

All such theories differ in terms of how strongly they emphasise empirical elements, refer to scientific evidence and philosophical concepts, as well as accommodate the role of reason. They differ in terms of their positioning across the descriptive-normative spectrum of the character of their theories. Ruse's positions show clear *primacy of empirical evidence* over philosophical concepts. In case of Foot, one could say the opposite: even though she draws on the evolutionary knowledge of biological characteristics of species, she uses this evidence to *accommodate her normative, neo-Aristotelian interpretations*. In fact, she is explicit about *not* referring to such facts in empirical terms: "We could say, therefore, that part of what distinguishes an Aristotelian categorical from a mere statistical proposition about some or most or all the members of a kind of living thing is the fact that it relates to the teleology of the species. It speaks, directly or indirectly, about the way life functions such as eating and growing and defending itself come about in a species of a certain conformation, belonging in a certain kind of habitat" (Foot, 2001, S. 32). Even though the Aristotelian categorical resembles a statistical proposition, it is distinguished by the teleological, value-laden character of the statement. In this case, our interpretation of purpose is attached, as opposed to it being a scientific, empirical, statistical proposition.

Nevertheless, the fact remains that Ruse (2017), Foot (2001) and others have in common the recognition of parallels in biology and human valuing. Ruse and Foot explicitly link this phenomenon with evolutionary background of our embedment in nature. Both authors, and particularly Ruse (2017), frequently make references to *all kinds of evolutionary evidence* without explaining the nature of these references (such references, particularly in regards to Ruse, will be discussed more specifically in chapter 5, 5.2, and 6, 6.1 and 6.2). The presence of parallels in biological design and human valuing seems to suggest to some philosophers that nature is relevant to valuing. And yet, it is frequently ambiguous how they understand the relevance of evolution and biology to valuing and normativity: is it relevant to how we *tend to* value but or to how we *should* value? Certainly, any normative conclusion about how we should value drawn from a descriptive statement about how we tend to value without a justification would not be valid. This is true irrespective of whether in how we value and how we should value are present. Unless *arguments* are given, such parallels are incidental. In fact, despite their references to evolution and biology, neither Ruse (2017) nor Foot (2001) actually reflect on *what the reference to evolution theory* means and how it should be understood in the light of valuing as an epistemological exercise of the valuer.

Frequently, authors do not explicitly differentiate descriptive statements about human nature provided by the evolutionary sciences from normative statements about human action. This

makes it much more difficult to understand the difference between *statements about what is* and *statements about what should be*. It does not only prevent us from understanding how they understand relevance of scientific facts to their philosophical theories and normative statements. It also fails to explain why evolution and biology are relevant to valuing and normativity and why we *should* refer to nature, beyond the mere observation that we are evolutionarily embedded in nature. This will be further discussed in chapter 5 more specifically in 5.2.

In order to address this ambiguity in making references to nature and reduce its controversial character, the differentiation between descriptive and normative understanding of such references is proposed and applied with regards to statements and pieces of evidence about the relation of our valuing to biology. Both these perspectives will be discussed in the upcoming sections. The recognition between descriptive and normative approach to understanding references to nature and the ontological relation between fact and value is coherent with emphasising the logical and epistemological differences according to the epistemological perspective of this issue. More specifically, the normative understanding allows to recognize the character of valuing as an epistemological exercise which delineates evaluative from factual statements and phenomena characterised by them. This approach will be elaborated in this chapter, in order to apply it to authors who promote references to nature in chapter 5.

4.3 Descriptive evolutionary framework and evidence: advanced mental capacities as an evolutionary adaptation

Following an outline of the evolutionary framework, as well as the discussion of its interpretation, it is interesting to discuss and interpret some examples of explanations derived from evolutionary framework. An analysis of the evolutionary hypothesis about advanced mental capacities provides background explanation about certain biological predispositions attributed to these capacities. The account of advanced mental capacities is aligned with the evolutionary framework and is also linked to explanation of specific evolutionary evidence.

The idea that biological functions and characteristics of organisms are evolutionary adaptations that serve the function of survival and reproduction of species does not seem particularly ground-breaking. It can be regarded as common knowledge that our bodies are built to maintain survival. However, the idea that *also* advanced mental capacities belong to such evolutionary adaptations and have such a biological function is more unfamiliar. This is partly due to the dualistic assumption of mind as radically separate from the rest of our body.

In a nutshell, the evolutionary hypothesis about advanced mental capacities is that their biological function is to foster cooperation which ensures our survival chances, thereby contributing to the ultimate biological end. For this reason, advanced mental capacities predispose us to certain social behaviours expressed in value and normative predispositions. This view has been entirely endorsed by Ruse. The philosopher explicitly states that his "position about the evolution and use of mind is deeply rooted in Darwinism—I see mind as another adaptation, like hadrosaur honking tubes" (Ruse, 2017, S. 175). Also Wilson, a prominent sociobiologists, but a much more controversial figure than Ruse, emphasises this idea: "The human mind is a device for survival and reproduction, and reason is just one of its various techniques" (Wilson, 2004, S. 2). What kind of statement does it offer about our embedment in nature? In the descriptive manner, this idea of evolution theory explains much about the way we *tend to* (we are predisposed to) use these capacities. It accounts for how our social behaviour is predisposed, which includes evaluative and normative predispositions.

Already in the "Descent of Man", Darwin made a suggestion on that "as the reasoning powers and foresight of the members became improved, each man would soon learn from experience that if he aided his fellow-men, he would commonly receive aid in return" (Darwin, 1874). Advanced mental capacities give us the possibility to undertake diverse intelligent, rational and moral considerations. Darwin seemed to have believed, what is widely nowadays still pursued by evolutionists, that these rational and moral capacities have an evolutionary purpose: "It must not be forgotten that although a high standard of morality gives but a slight or no advantage to each individual man and his children over the other men of the same tribe, yet that an increase in the number of well-endowed men and an advancement in the standard of morality will certainly give an immense advantage to one tribe over another. A tribe including many members who, from possessing in a high degree the spirit of patriotism, fidelity, obedience, courage, and sympathy, were always ready to aid one another, and to sacrifice themselves for the common good, would be victorious over most other tribes; and this would be natural selection. At all times throughout the world tribes have supplanted other tribes; and as morality is one important element in their success, the standard of morality and the number of well-endowed men will thus everywhere tend to rise and increase" (Darwin, 1874).

From this perspective of biological purpose, morality (more precisely, certain value and norm predispositions) is a an evolutionary tool to manage social relations, given that living in a group carries not only increased survival chances but also risks of conflict which can negatively influence survival and reproduction. It needs no explanation that when some individuals or groups have limited access to fulfilment of their needs, conflict and violence arise. Because

conflicts and violence are detrimental to survival and reproduction of species, moral predispositions are geared to override and tame these conflicts. Thus, in a similar tone, de Waal states: "the profound irony is that our noblest achievement—morality—has evolutionary ties to our basest behavior—warfare. The sense of community required by the former was provided by the latter. When we passed the tipping point between conflicting individual interests and shared interests, we ratcheted up the social pressure to make sure everyone contributed to the common good" (de Waal, 2006, S. 55). Thus, it is quite uncontroversial to state roughly that we need to find a balance between fulfilling our own needs and allowing others to fulfil their needs. For this reason, we seek (and should seek) the best ways to behave in a society and the concept of morality is an important tool towards this goal. This explanation is valid from the descriptive, scientific point of view as characterising the biological purpose of advanced mental capacities. However, interestingly, from the normative point of view, we also accept such explanations for moral purposes.

In this vein, the evolutionary explanation is that morality helps us safeguard the good spirit of cooperation by facilitating living in a society and thereby contributing to survival. To fulfil this purpose, it *predisposes* us to certain values and norms which foster social relations. Both sociobiology as well as study of animal behaviour are aligned with this hypothesis. De Waal notes that the need for cooperation can be scientifically explained with reference to analogies with animals: "all scientific indications are that we are hardwired to be in tune with the goals and feelings of others, which in turn primes us to take these goals and feelings into account" (de Waal, 2006, S. 176). From the perspective of evolutionary biological purpose, this "hardwiring" should make us more fit to cooperate, thereby increasing our survival changes. In consonance with de Waal, Ruse states that it is generally accepted that social behaviours which facilitate cooperation originate in natural selection as products of adaptational tools that help further the purpose of evolution (Ruse, 2017).

Sociobiological evidence suggests that these predispositions, which are alternatively referred to as epigenetic rules, kin selection and reciprocal altruism *incline* us to act in certain ways towards others what is manifested in default "innate biases" as moral attitudes and values we have. "Thus, the epigenetic rules incline us to think that we ought to behave morally towards our fellow humans, particularly those in our pack or society. Morality, therefore, rests ultimately on the innate biases of the human mind, these biases being an adaptive function of the evolutionary process" (Ruse, 1984, S. 11). This gives the impression that epigenetic rules determine our actions, however, Ruse merely suggests that they *predispose* us towards certain

actions (note the word “incline”; however, this indeed shows how important is a correct selection of words).

Such explanations are believed to explain the evolutionary nature of value predispositions designed according to the biological purpose. Evolutionary studies investigate the biological evolutionary rooting of specific tendencies in valuing and normativity in respect to human nature and morality. The evidence has lead both Ruse and Wilson to believe that, although understood descriptively without any normative implications, these are *biological foundations* of morality, values and norms: “biology shows that internal moral premises do exist and can be defined more precisely. They are immanent in the unique programmes of the brain that originated during evolution” (Ruse & Wilson, 1986, S. 174). These statements show that evaluative conceptions are predisposed and that this is a manifestation of the framework that explains embedment in nature. In other words, we have these predispositions because of the way biology defines the mode of pursuing survival, through the biological design of our bodies. Again, it should be emphasised that description of such predispositions makes no normative statements. Recognizing the logical delineation of facts, values and norms, we can only speak of values and norms as products of the autonomous normative *exercise* of advanced mental capacities, rather than their “hardwiring”. Evolutionary hypotheses and evidence with regards to the biological purpose of advanced mental capacities and their products only explains our *tendencies*. It does not explain why we *choose* to follow some evolutionary predispositions, or in other words, why the agent *embraces* values and norms in line with biological facts. Thus, such an understanding of biological foundations of morality is rather limited and cannot entirely explain the phenomenon of alignment of fact and value.

Some such biological predispositions can certainly be objectively evaluated as rational, especially when they are other-directed. Such instances of alignment between biological predispositions as facts and our values are examples of parallels that urge philosophers such as Ruse (2017), Foot (2001) or Finnis (1980) to recognise the relevance of nature to morality. However, the role of reason and the epistemological aspect of valuing and formulating norms should be highlighted against the descriptive appearance of biological facts in valuing which can be accounted for with reference to evolution theory.

Section 4.4 will elaborate on the specific claims of sociobiology and empirical study of animal behaviour. It will investigate in more detail how precisely advanced mental capacities work to predispose us towards fostering cooperation through predisposing certain value and normative conceptions of possibly moral character. This knowledge has no necessary implication about what moral attitudes and values we *should* assume, but it explains the presence of certain

inclinations from the perspective of our embedment in nature. The analysis also provides examples concerning how, from the descriptive perspective, these statements should be interpreted.

4.3.1 The biological origin of subjective states

Prior to human autonomous evaluative and normative decision-making, advanced mental capacities and various predispositions resulting from them are by default geared towards evolutionary purpose. Predispositions do not entirely explain human action and decision-making, but only our tendencies. Manifested as self-evident urges, desires, passions or natural inclinations, they characterise our *subjective states*. In 2.2.2, the idea was outlined, that such subjective states experienced by an agent motivate embracing values and lead to a normative behaviour. They may or may not involve reason, and they are primarily characterised by desires, passions, sentiments or other inclinations. Such "subjective states" are closely linked with our emotions which are believed to be evolutionary tools. Their explanation follows the hypothesis about advanced mental capacities and morality as a mean to strengthen cooperation. Animal behaviouralists, such as primatologists, study such tendencies in animals to draw similarities and propose explanations applicable to humans. Animal behaviourists clearly recognize the role of emotions in social behaviour of non-human primates, with emotions being a natural feature of both human and non-human primates. For example, de Waal claims that: "there exists ample evidence of one primate coming to another's aid in a fight, putting an arm around a previous victim of attack, or other emotional responses to the distress of others (…). In fact, almost all communication among nonhuman primates is thought to be emotionally mediated" (de Waal, 2006, S. 25-26). Emotions are clearly shared by some animal species and de Waal offers many arguments and examples from investigation of primates showcasing their leading role in social behaviour (de Waal, 2006).

Recognising the prominence of emotions in animal responses, de Waal suggests that emotions have an important, but – even despite Hume's influence – underestimated evolutionary role in human nature. De Waal suggests that emotions have an important evolutionary role in making humans sensitive and receptive to their fellows in order to strengthen cooperation. They feed into our decision-making and interact with reasoning. In fact, de Waal points out that we have been traditionally influenced by the (dualistic) idea of humans as emotion-free, rational, decision-making machines, as in a dualistic worldview, emotions have been perceived as natural and therefore as inferior to rationality. In this view, emotions are viewed as the dualistic opposite of reason, as body is to mind. De Waal states: "A tendency in the West to see emotions

as soft and social attachments as messy has made theoreticians turn to cognition as the preferred guide of human behavior. We celebrate rationality. This is so despite the fact that psychological research suggests the primacy of affect: that is, that human behavior derives above all from fast, automated emotional judgments, and only secondarily from slower conscious processes (…)" (de Waal, 2006, S. 6-7).

Such evidence on diverse emotions motivating certain predispositions to behaviours conforms with Hume's infamous views about sentiments and emphasising the role of emotions that guide passions, desires, sentiments in human decision-making. Indeed, de Waal praises Hume who "saw morality as a product of the emotions, placing empathy (which he called sympathy) at the top of his list" (de Waal, 2014, S. 186). Likewise, also Ruse appreciates Hume's views, he states that the philosopher "is the complete forerunner of the evolutionary ethical position sketched in this paper. Hume argued that morality is not some objective phenomenon, but a question of feeling or sentiment which works between people in order to facilitate social mechanisms. This is entirely the position of the evolutionist" ((Ruse, 1984, S. 23) - one must resist the urge to discuss Ruse's suggestion that "morality is not some objective phenomenon", as this will be addressed in chapter 6, 6.1 and 6.2).

All this suggests that what is frequently interpreted as "subjective states of a subject" is certainly in large part an effect of evolution and our biological predispositions. We *tend* to have internal, self-evident urges, desires and inclinations based on various emotions by virtue of our biological design. This is why also Callicott claims that "Hume's ethics "might almost seem to demand an evolutionary background" (Flew, 1967). How else could Hume explain, what he claims to be a fact, that the moral sentiments are both natural and universal, that is, that they are fixed psychological characteristics of human nature" (Callicott, 2008).

Subjective states that lead us to embrace certain values through subjective and/or objective evaluation may be linked to biological occurrences such as emotions, desires. Evolution sciences capture these phenomena and explain them with regards to the biological purpose of survival and evolution of species. Their biological origin is an evidence of the embedment of human in biology in nature. However, understood from this descriptive perspective, unless validated by reason, they can be morally fallible and irrational impulses. Subjective states may be no more than evolutionary predispositions which are not necessarily good or moral. This is why following of such urges without objective evaluation and involvement of reason may lead

to unjustified moves from an *is* to an *ought*. Even though we may often follow such predispositions, this does not necessarily show how we *should* act.

4.3.2 Empirical evidence against the mind-body dualism

Before turning to examples, it is also worth-noting that all this scientific evidence about advanced mental capacities, or mind, is a clear argument against the mind-body dualism (see 2.2.1). It shows the mind as biological and natural in contrast to what has been perceived traditionally. There is strong evidence of the biological origin of human mind, despite the fact that there is still work to be done in answering detailed questions about the way our mind works and how exactly its features come about: "while the origination problem is as yet unsolved, major work has been done in that direction, and no one thinks it needs the kind of conceptual or ontological jump that the move from body to mind seems to demand" (Ruse, 2017, S. 176). De Waal (de Waal, 2006) explicitly argues that evolution studies challenge the mind-body dualism. The primatologist points out that the differences between humans and other animals (which to a large extent consist in advanced mental capacities) have traditionally been inflated and perceived dualistically where advanced mental capacities were seen as non-natural. Anything that is specifically human and that originated in human mind, such as morality, valuing, culture, society etc. tends to be understood as unnatural. As de Waal observes, this heritage makes some perceive "morality as a cultural innovation achieved by our species alone. This school does not see moral tendencies as part and parcel of human nature. Our ancestors, it claims, became moral by choice" (de Waal, 2006, S. 6). Many point out that the status of human mental capacities was further exaggerated due to the significant influence of the Christian religion (Fitzpatrick, 2000). Nowadays, even though the reference to God has lost its gravity, the dualistic tendencies in understanding our nature persist.

Evidence presented by de Waal suggests that humans and non-human primates may have similar biological predispositions to social behaviours which in humans can be understood as predispositions to certain values. Humans embrace some of these predispositions as values based on conscious, autonomous and rational valuing. Moreover, they are also shown to have some sort of reasoning capacity. Given that some forms of subjective and objective valuing may be present in case of some non-human primates, this evidence certainly raises the question what it is to value and whether such animals are capable of valuing. Even though this question will be raised also further with regards to discussions of goal-directedness (5.1.2.1), it cannot possibly be answered in this work.

De Waal and collaborators have produced substantial evidence on various forms of social and moral, or morally relevant, behaviours in primates. For example, they have examined consolation among great apes (de Waal, 2006). The finding is that that primates consoled recipients of aggression to "alleviate their distress". This seems to largely overlap with the pattern of consolation among our own species. By consoling others, we manifest not only compassion but also the fact that we hold them or their damage valuable. In humans, this involves reasoning and understanding of values. While it would be inappropriate to conclude that also in non-human primates consolation must involve reasoning and valuing, one cannot exclude the possibility that this evidence suggests that, in some form, similar capacities are present in these animals.

De Waal (2006) has also observed the phenomenon of impulse control among primates. Some level of control as well as some level of remorse suggest that these primates are not only to some extent conscious of their behaviour but also are capable of *evaluation* of their behaviour against standards other than their individual, subjective ones. Animals are shown to engage in some form of reasoning about what they *should* do. Other well studied behaviours are to some extent "cognitively advanced" cases of reciprocal altruism, some sense of understanding of fairness, at least in relation to oneself, and a basic form of community concern (de Waal, 2006). The fact that non-human primates are capable of commitment for purposes which do not directly and immediately contribute to individual functions or to individual good means that they can "value" (in the sense of primate equivalent of human valuing) not only in relation to themselves but also in relation to others.

While it cannot be said that primate behaviour is anywhere as complex as human behaviour in terms of social relations and moral norms, even a basic and simple form of human-like moral behaviour is a very strong support for the break between body-mind dualism. De Waal convincingly shows that primates manifest some forms of morally-relevant social behaviour (although his discussion of this evidence (2006) may be more controversial). While their capacities for internalizing needs and goals of others, judgement and reasoning are much less advanced than ours, studies show the ability to evaluate as well as produce and understand rules of social order. At the same time, similarities between some forms of social and moral behaviour of humans and animals support the hypothesis that biology predisposes such tendencies in human and non-human primates alike.

The evidence that evolution predisposes certain evaluative and normative conceptions, and the capacity to reason compelled de Waal to claim that humans are social animals by nature, rather than by some conscious choice which they have supposedly made at one point. "These ideas

about the origin of the well-ordered society remain popular even though the underlying assumption of a rational decision by inherently asocial creatures is untenable in light of what we know about the evolution of our species. Hobbes and Rawls create the illusion of human society as a voluntary arrangement with self-imposed rules assented to by free and equal agents. Yet, there never was a point at which we became social: descended from highly social ancestors—a long line of monkeys and apes—we have been group-living forever. Free and equal people never existed. Humans started out—if a starting point is discernible at all—as interdependent, bonded, and unequal. We come from a long lineage of hierarchical animals for which life in groups is not an option but a survival strategy. Any zoologist would classify our species as *obligatorily gregarious*." (de Waal, 2006, S. 4). In another quote, de Waal observes, evolution science shows that: "there never was a point at which we became social: descended from highly social ancestors—along line of monkeys and apes—we have been group-living forever" (de Waal, 2006, S. 6). In other words, there never was a point where we *decided* to adopt moral relations to each other in the sense that we have had this biological tendency all along.

De Waal is both right and wrong in his argument. On the one hand, we cannot deny that the idea of an organized society resulting *entirely* from a choice is a typical view originating from the dualistic worldview. In such view, the mind in disconnection with nature is seen as entirely responsible for well-ordered and moral societies. As the evolution sciences show, well-ordered and moral societies are natural for us to pursue. However, at the same time, it is our autonomous and rational choice to pursue such moral and harmonious co-existence with others. In doing so, we not only follow natural predispositions to such co-existence; we do so by conscious reasoning and valuing. This means that we can also out-do evolutionary predispositions by rejecting them and finding better, more moral and rational ways of cooperating. It is one thing to follow predispositions and it is an entirely different category of action to *decide* about our action consciously, autonomously and rationally.

In his discussion, de Waal himself paradoxically seems to subscribe to dualism; pursuing a well-order society is an either-or question. The author's statement is also uncompromisingly assigning human nature to nature, rather than also recognizing the importance of conscious and rational choice. There is no need to argue that we are social because we are *either* natural *or* because we autonomously and rationally decide to be so. Both nature and autonomous choice are equally relevant, important and can be reconciled.

Despite the fact that one can reject the idea of mind-body dualism and promote scientifically-backed concept about a biological continuity between mind and body, one should not be

concerned about undermining the role of human autonomy. One may acknowledge that human nature is entirely biological, but the discussions also highlight that we have the autonomy to reason and to choose to either actualise these predispositions or to reject them. This recognition follows the emphasis on valuing as an epistemological exercise.

4.4 Descriptive evolutionary evidence of embedment in nature: sociobiological examples of biological value predispositions

The previous sections have outlined the evolutionary framework and evidence concerning advanced mental capacities about how evaluative and normative biological predispositions can be explained from the perspective of evolutionary biological design. This partly explains parallels in biology and valuing because it explains how the biological suggestions, which we frequently *happen to* embrace, come about. Sections below will add detail to these claims by analysing specific examples of predispositions which confirm our embedment in nature descriptively and scientifically, according to evolution theory. Similarly to evidence in 4.3.1, these predispositions may also be understood to explain some subjective states.

Analysing and interpreting specific evidence about predispositions should further help capture the parallels between biology and valuing outlined in the sections above. Some of such predispositions are embraced by us as values. Thus, it is not only an evidence of deep embedment in nature but may lead to the illusion that values are "contained" in biology, or, as other state, nature "carries values" (Rolston, 1982). For purposes of epistemic clarity, we cannot equate predispositions with actual values, even despite our strong embedment in nature.

Value and normative predispositions which create the bases of tendencies to social and moral behaviours in sociobiology are examined at the level of genes. In other words, these are the connections between genes and value predispositions which are expressed in tendencies to certain social behaviours, referred to as "epigenetic rules". These are "genetically based processes of development that predispose the individual to adopt one or a few forms of behaviours as opposed to others". In other words, these "rules are rooted in the physiological processes leading from the genes to thought and action" (Ruse & Wilson, 1986, S. 180). Thus, epigenetic rules can be understood as predispositions to certain social behaviours. They should not be understood as explaining social behaviour in its entirety.

The claim is that within species, differences in epigenetic rules are only slight and remain fundamentally similar: "the epigenetic rules of mental development are relative only to the species. They are not relative to the individual" (Ruse & Wilson, 1986, S. 186). This has to do

with the evolutionary fact that nature of organisms is specific to organisms of the same species. This feature of evolution theory is largely characteristic of Foot ("By contrast, 'natural' goodness, as I define it, which is attributable only to living things themselves and to their parts, characteristics, and operations, is intrinsic or 'autonomous' goodness in that it depends directly on the relation of an individual to the 'life form' of its species." (2001, S. 26-27)).

Ruse and Wilson further state that "human cultures, in contrast, tend to converge in their morality in the manner expected when a largely similar array of epigenetic rules meet a largely similar array of behavioural choices. This would not be the case if human beings differed greatly from one another in the genetic basis of their mental development" (1986, S. 186). Nevertheless, this is an assessment which can be perceived differently by anthropologists, sociologists, psychologists, sociobiologists, etc. Indeed, even from a philosophical point of view one could argue that, since culture is a product of an exercise of advanced mental capacities, also for normative purposes, divergencies between culture are vast due to the autonomous creative powers of our minds. While it is neither necessary nor possible to settle on characterization of divergencies in epigenetic rules and culture presently, it is important to note that the discussion of similarities and differences can be ascribed to a both shared origin and human nature, as biologists argue, as well as autonomous exercise of mental capacities, as philosophers and potentially others would argue.

Even these considerations show that there is a long way between a predisposition and an actual action involving interference of factors. Along this way, there are non-directly-genetic factors and active considerations and reasoning by the agent which intervene and are cumulatively referred to as "culture" by sociobiologists. What follows, is the need to once again emphasise that sociobiology refers to tendencies in social behaviour or value predispositions, the study should not be misunderstood as being able to account for behaviour, moral norms and values in their entirety. While it only accounts for certain predispositions, behaviour is dependent on human choice and further factors influencing it. Indeed, it would be more appropriate to specify that sociobiology studies the link between genes and *predispositions* to certain behaviours. These predispositions are only one input to the process that culminates in decisions and conceptions, including morality and values.

Brief discussions of three cases of sociobiology in the upcoming sections should provide a blueprint for interpreting scientific evidence in philosophical context. The blueprint applies the developed differentiation between interpreting descriptive evidence and making normative conclusions. It respects ontological statements without blurring the logical and epistemological specificities of what it is to value. As such, it helps to understand how such statements about

our nature and predispositions, which nonetheless show how deeply we are embedded in biology, should be interpreted by delineating biological design from human choice in valuing and normativity. Since this is the type of evidence that is very strongly argued as relevant to morality by Ruse (2017) (see chapters 5 and 6) – who argues that evolutionary adaptations are values (5.2.3) – such blueprint is particularly relevant for discussing his positions.

4.4.1 Kin selection

The first interesting and specific case where sociobiology has established evidence for a biological value predisposition expressed in a tendency to a behaviour is kin selection. Kin selection explains why individuals tend to favour survival and reproduction of relatives. Ruse and Wilson explain that the idea behind is that "genes prescribing co-operation spread through the populations when self-sacrificing acts are directed at relatives, so that they (not the co-operators) are benefited, and the genes they share with the co-operators by common descent are increased in later generations" (Ruse & Wilson, 1986, S. 179). This explains two aspects of kin selection: first, that genes foster cooperation through spreading cooperation-friendly genes when "self-sacrificing acts are directed at relatives" and, at the same time, why we tend to favour kin. Cooperation in that sense serves survival and reproduction of species (ultimate biological end, or purpose) as it allows to pass on own genes through reproduction of relatives. It is clearly not in our interest, perceived from our individual autonomous perspective rather than from the biological perspective, to self-sacrifice for others. It is in the interest of evolution as it helps perpetuate our genetic material. This leads to an important observation that one should not interpret biological "interest" in the same manner as we autonomously interpret it.
Transferring this explanation to humans, kin selection seems to address a functional tendency, from the perspective of evolution, which we generally embrace as a value. Favouring of relatives' good is to us unquestionably *good and normal* as we value our relatives genuinely. Moreover, there is little need to give moral justifications for why we tend to care for our closest family members. Sociobiology provides a biological explanation for why this tendency to favour relatives is present, from the biological or evolutionary point of view. Of course, this does not mean that we consciously and intentionally pursue the goal of "passing on of our genes" or that of survival of our species. In our valuing of relatives, the knowledge of evolutionary biological purposes is truly irrelevant *to us and our normative exercises*. We value relatives for other reasons. For us, favouring relatives seems to be an *end* whereas for evolution it is only a *means* to another end (survival and reproduction of species through passing on of our genetic material). Despite this, we actualise this predisposition by attaching values and

reasons to it, even if the purpose of our action is not entirely aligned with the purpose of evolution. In case of kin selection, as in many other cases, for example pranking as discussed in chapter 3, 3.3.3, the biological fact is aligned with our value.

We have such a predisposition, or a subjective state, and we also genuinely value our closest family members. Similarly, to the example of statements discussed in chapter 3, the fact, i.e. the presence of the predisposition or urge, becomes valued leading to fact-value alignment. However, there are certain differences to the examples in chapter 3. In cases of valuing our family, the presence of this value is so clear to us that we do not require to justify it with reasons and objective evaluation. We simply accept this universal subjective value and do need see the necessity of involving objective evaluation. Perhaps the only consideration we sometimes include is whether valuing of our family does not negatively impact others (others' rights or values).

The important observation is that we actualise predispositions, but our purposes differ slightly from biological purposes. Despite this, we actualise it because we consider it to be the best way to pursue survival (for our kin). On the side-line, this leads to another interesting observation with regards to kin selection and other kinds of predispositions. In case of predispositions such as eating, pranking or anger-driven retribution, the predisposition is to value *our* own individual life. In contrast, in cases of kin-selection, we are predisposed to value with regards to *others'* life. This case shows that biological predispositions, and evolutionary design in general, are not necessarily self-centred, as it often seems to be understood (e.g. by (Fitzpatrick, 2000)). Indeed, this biological predisposition parallels our autonomous choice as we value the life of our family members as ends in themselves and we also recognize that it is an instrument for them to pursue their own goals. From the autonomous perspective, we often do not think about own interest in this straightforward, self-directed manner and consider kin interest as our own interest. Elements of other-directedness are also embedded into evolutionary predispositions.

The sociobiological explanation combined with the observation that we actualize the predisposition is that we further this biological end when we actualize this predisposition, even though it is not our autonomous and rational intention to further the biological end but rather our own values set autonomously. At first sight, it is indeed a shocking revelation. However, this has little implication on our subjective urge to value family members and does not lead us to question it or evaluate in other ways. We certainly do and will continue to love and value our family members, with or without the knowledge about what predisposes us towards it. This fact does not diminish the human feelings and values of our closest family members. From our perspective, the biological explanation for kin selection is quite irrelevant.

Thus, the explanation of the value of our family is independent from the descriptive explanation of kin selection. We value our families because they are valuable for us, with or without further reasons. In this case we are not deriving a value *from the fact of the principle of kin selection*. We derive the value *from the fact of having an inclination to favour our relatives* (i.e. the manifestation of kin selection, not the knowledge of kin selection). Such derivation is justified by the subjective state, an urge to value kin, and lack of moral objections (i.e. valuing our family does not negatively impact others).

The self-evidence of this example bears certain similarities to the value of life. This is a peculiar case because, as the case of the value of life, because we do not really need *an explanation* of why we value kin. We simply value them dearly and this suffices to motivate and justify normative behaviour. This is a pronounced parallel between biology and our valuing that shows how deeply we are predisposed end embedded in nature. Despite this, one can clearly maintain the logical and epistemologically-relevant delineation of fact and value. We do neither derive an *ought* from an *is* without justification, nor do we undermine the role of our autonomous choice.

4.4.2 Reciprocal altruism

Second famous sociobiological mechanism is known as reciprocal altruism. It accounts for cooperation on a larger scale: "as its name implies, this involves transactions (which can occur between non-relatives) in which aid given is offset by the expectation of aid received. Such mutual assistance can be extended to a whole group, whose individual members contribute to a general pool and (as needed) draw from the pool" (Ruse & Wilson, 1986, S. 179). Evolutionary explanation of reciprocal altruism highlights that it is in our interest to perform other-oriented acts, uphold moral standards and act morally, because we can expect the same behaviour returned. Such transactional altruism fosters cooperation because it creates valuable relationships between members of groups.

Clearly, this "transactional" explanation of altruism is different from what we can understand as "genuine" altruism, which is linked to self-less acts which do not directly and consciously involve any expectations in return. Indeed, the very essence of genuine altruism is the fact that it does *not* involve expectations of return. Reciprocal altruism accounts for a biological version of altruism as the "glue" of cooperation. Understanding reciprocal altruism as a biological value predisposition, comparing the two types of altruism perfectly frames the specificities of what it is to value. While reciprocal altruism may be a functional tendency, human valuing in

case of humans is a completely independent process. Thus, reciprocal and genuine altruism are quite distinct.

Human altruistic actions performed with full consciousness require strong selfless convictions and reasoning capacities. Although the way in which we embrace altruistic tendency is genuine and involves significant effort, by doing so one still unintentionally furthers the purpose behind reciprocal altruism. What are the reasons behind genuinely altruistic decisions? For example, somebody who performs self-sacrificing acts, such as hunger strike, does so because they have noble and human beliefs and desires about what they should do in order to contribute to some cause, such as supporting human rights. They do it for someone else, even at the expense of their own health. Instead of prioritizing their good, they prioritise the greater good. One could argue that, even if we do not expect it or ask for it, we receive strengthened cooperation in return.

Rational decisions that lead to genuinely altruistic behaviours are independent from the knowledge about or the presence of reciprocal altruism and it does not in any way diminish the value and meaningfulness of genuine altruism. While the evolutionary agenda is irrelevant knowledge *to our decision-making* about performing altruistic acts, it is true that its presence shows how strongly we are embedded in nature. When we choose to embrace such predispositions or subjective states autonomously and rationally, we introduce and pursue our own agenda.

It is often understood that biological or natural inclinations are very self-centred and non-altruistic. Yet, discussion of kin selection and reciprocal altruism shows was that we may be predisposed towards other-directed actions too. Nevertheless, this does not negate the fact that survival and reproduction are the ultimate goals of organisms. Indeed, altruistic mechanisms have been well-observed in some social insects which are ready to give up their lives for protection of their caste (Fitzpatrick, 2000). In this case, the hypothesis is that such insects pursue their survival and reproduction indirectly through contributing to the welfare of the group, given that welfare of the group ensures survival and reproduction of its members. Just like in the case of humans, cooperation is seen as a tool serving survival and reproduction. This makes sense from the perspective of evolution because evolution favours survival of species over individual survival. However, such observations help us understand how very natural other-directed tendencies can be, suggesting that to a certain extent even such tendencies can be predisposed, even though, in case of humans, other-directedness is a distinct kind of phenomenon attributed to our moral considerations.

Altruism has grades; between transactional and genuine altruism there are many different shades of altruism, some of which can be more directly associated with reciprocal or with genuine altruism. Sociobiology is certainly not able to directly account for genuine altruism because this form of altruism involves human evaluative and rational capacities. These capacities produce values which are logically and epistemologically different from facts, such as biological functions. However, even genuine altruism, after all, is also a form of sacrifice for the greater good that seems to have biological function (of sustaining cooperation). Altough fulfilling this biological function may only be a "side effect" of our intentional, conscious and rational judgement. In other words, even genuine altruism may be to some extent predisposed in a much simpler form. Even so, genuine altruism is no less meaningful because it involves valuing, while biological predispositions are only tendencies.

4.4.3 Incest

Another successful application of sociobiology which is worth mentioning is the issue of incest taboos. In most cultures, incest is considered abhorrent. Research has shown that humans are *genetically predisposed* to avoiding sexual relations with persons they have spent a considerable amount of time with in childhood. According to Ruse, "direct evidence suggests that human biology (as opposed to culture exclusively) makes one unable psychologically to relate sexually with those with whom one is raised" (Ruse, 1979, S. 162). It is understood as a genetic predisposition which is necessary in order to avoid unfit offspring as a consequence of reproduction among relatives (Ruse & Wilson, 1986). Sociobiology studies the genetic link with the "juvenile inhibition: the measures of its strength and universality, and a deeper understanding of why it came into being during the genetic evolution of the brain" (Ruse & Wilson, 1986, S. 184). At the same time, incest is clearly a moral issue that manifests certain value conception.

It could be argued that the fact that incest is perceived as wrong in most societies is also aligned with biological predispositions. Ruse and Wilson claim directly that "formal incest taboos are the cultural reinforcement of the automatic inhibition, an example of the way culture is shaped by biology. (…)" (Ruse & Wilson, 1986, S. 184). Indeed, the overlap between the biological predisposition and our perception of incest is difficult to dismiss as a coincidence. In fact, we embrace this predisposition very enthusiastically and we are very well aware that the reason why we do so is because the idea of incest *is* simply abhorrent. It is another case of a universal subjective perception. However, it is difficult to further explain the negative emotions we have towards incest, as much as it is difficult to argue why we value life or our kin or our life. The

only reasons we tend to provide about the inappropriateness of incest refer to genetic problems in the offspring. However, these are not really the reasons why we avoid incest; we avoid incest because it is a repulsive idea.

These examples show strong parallels between biological predispositions and valuing. In many cases, we even follow biological predispositions when we have no independent *reasons*. This evaluative and normative behaviour is embraced by us based on strong subjective states alone. However, in many other cases, employment of reasoning leads us to reject a biological predisposition. It is also the biological function of our advanced mental capacities to help us evaluate our immediate predispositions and choose better.

4.5 The descriptive references to embedment in nature and biological predispositions in philosophy

The evolutionary framework and evolutionary evidence about predispositions to certain values and normative conceptions has no normative implications. Predispositions are not values, unless they are evaluated and embraced by agents, ideally with involvement of reason. However, this descriptive account of our embedment in nature can indeed demonstrate the deep parallels between biology and valuing, as recognised by Ruse (2017) or Foot (2001). It shows that some natural phenomena are constitutive of our perception of values. The above sections have attempted to outline the relevance of empirical studies to evaluative and normative questions in order to demonstrate how such empirical statements, which are frequently referred to by philosopher such as Ruse or Foots, should be understood. However, the present section aims to briefly note that such points are made also by other philosophers.

In fact, acknowledgement of this deep embedment in nature can be interpreted in Hart's understanding of the "minimum content of natural law" that characterises law. The author recognises that the concept of law bases on certain natural facts about humans that ensure *its purpose* ("in the absence of this content men, as they are, would have no reason for obeying voluntarily any rules; and without a minimum of co-operation given voluntarily by those who find that it is in their interest to submit to and maintain the riles, coercion of others who would not voluntarily conform would be impossible" (Hart, 1961, S. 189)). These natural facts about how cooperation can be sustained clearly pertain to the evolutionary concept of cooperation in a similar manner as predispositions such as reciprocal altruism. Of course, Hart highlights that "connexions of this sort between natural conditions and systems of rules are not mediated by reasons; for they do not relate the existence of certain rules to the conscious aims or purpose of those whose rules they are" (Hart, 1961, S. 189). And yet, they are indisputably manifested

as important natural conditions that *influence or predispose* our value and normative conceptions. Such observations about parallels in the contents of biological predispositions and values (or morality) manifest our embedment in nature descriptively, even though they do not constitute justifications why respecting this embedment is rational, as correctly Hart notes.

Another example of how descriptive understanding of embedment in nature is present in philosophy, beyond authors such as Foot or Ruse who explicitly refer to evolution theory, is John Finnis. As was discussed previously, Finnis' basic goods are identified partly based on the observation that we *tend to* value them and partly based on the argument that they are valuable and rational to value. Thus, it involves a partial recognition of our natural predispositions, or tendencies, which then are validated by reason.

Except for the value of life, the proposed basic goods of Finnis' pertain more to human psychology: knowledge, play, aesthetic experience, sociability, practical reasonableness and religion. Such tendencies to certain values recognised by Finnis may be nothing else than biological predispositions. In fact, this assumption, next to the fact that we *have* these needs in a self-evident manner, is probably why natural lawyers refer to these goods as *natural*. It can be easily hypothesised based on evolutionary framework that we are predisposed to, for example, sociability because it helps us foster cooperation. There are also evolutionary explanations of the need to play as an evolutionary function to learn certain skills essential to survival (Wilson, 2004). Such hypotheses would offer similar explanations as kin selection or reciprocal altruism.

Thus, this demonstrates how such tendencies to value certain things and to respectively define moral systems in certain ways, which may be understood biological, indeed parallel the outcomes of our evaluative and normative exercises. Even though this descriptive account of our embedment in nature does not constitute any normative arguments, observations about parallels between biology as well as values and norms presented in 4.3 and 4.4 are a manifestation of the ontological relation of fact and value.

4.6 The normative account of embedment in nature: the value of life, purpose and the role of reason in embracing and rejecting predispositions

Evolution theory, its framework and its evidence *describes*, demonstrates, manifests and confirms *descriptively*, our embedment in nature. The evolutionary framework accounts for how our physical functioning and behaviour is biologically conditioned within the purposeful biological design. Thus, it explains how biology is relevant to our functioning. Scientific account, consisting of evolutionary framework and evidence, explains our biological design

such as the biological function of all traits (including advanced mental capacities) which predispose certain behaviours according to evolutionary purpose, confirm and conform to this framework. These predispositions are understood to explain *tendencies* to evaluative and normative conceptions. The evolution theory also accommodates the fact that humans have rational capacities that result from their advanced mental capacities. Thus, even though it accounts for descriptions of biological background of humans and their predispositions, it does not contradict that humans are capable of autonomous and rational reflection, reasoning and choosing.

As Fitzpatrick (2000) notes "Sociobiologists may be able to give partial accounts of the adoption of some such ends (and of the mental capacities that make this possible), but the point is that general tendency to adopt and to pursue such generic ends, along with the capacity and tendency for evaluating and ordering ends, may also lead to the adoption of certain ends and the performance of certain actions that go beyond what can be explained in sociobiological or biological functional terms" (Fitzpatrick, 2000, S. 324). The descriptive account provided by sociobiology and other evolutionary sciences allows to understand how biological facts are relevant to our valuing only from the point of view of explaining an overall framework of our biological design, embedment in nature, as well as its manifestations. While it captures our biological background and heritage, the descriptive point of view does not capture *why* we make references to nature and embrace biological functions and predispositions. As long as no reasons or normative ground for this are provided, such alignment between biological design and human valuing is *incidental*, as Fitzpatrick correctly points out (Fitzpatrick, 2000).

The embedment in nature can be investigated from the *normative* perspective: why we *choose* to autonomously embrace biological functions and predispositions. In line with the emphasis on the fact that agents reason autonomously, from the epistemological point of view, it is agents who decide on the alignment between biological design and their values and normative action. Thus, another type of discussion is indebted to this account. The normative perspective explains not *why we tend* to but *why we choose* to actualise the alignment, thereby explaining why it is no coincidence. In other words, with reference to 2.2.3, it investigates why valuing subjects refer to objects, as seen from the perspective of objective values.

The normative discussion is necessary because, given the very nature of a value, it requires addressing how autonomous and rational agents formulate values and why they refer to facts. The descriptive discussion provided above does not address this question. The descriptive

account alone fails to capture the fact that even if we are predisposed, we autonomously and rationally choose how to act on these predispositions. We are conscious and aware of our living, valuing, acting and we can also *autonomously object* to predispositions, if we evaluate it as rational. We can also autonomously act to our biological detriment, which under certain circumstances may even be rational and/or moral.

In the context of this work, this analysis is especially relevant because values and norms, especially from the objective moral perspective, necessarily require a rational foundation. Thus, the normative understanding of this relation, alignment and embedment in nature explains why facts about biological functions are not only valued, but also valuable and why it makes sense to refer to them. Thus, this type of discussion provides an overall framework explanation as to why such references are justified and do not necessarily constitute an is-ought fallacy. This leads back to the point observed in chapter 3, 3.3.4.2: we enquire into the *reasons* why facts are valued and valuable. Finally, the normative understanding concerning why we chose to value certain facts about our biological design complements the account of the ontological understanding of the fact-value relation. It supplements the descriptive explanation with reasons why this ontological design of biology (and humans as a part of it) is relevant to our valuing and should be considered to a certain extent.

4.6.1 Fundamental, instrumental and intrinsic, value of life in objective evaluations

Chapter 3 already addressed what will be emphasized and explicitly captured in this section with reference to reasons which urge valuers to value facts. Whenever we reason about biological facts, such as presence and knowledge about biological functions and predispositions, we objectively evaluate these facts against a fundamental value. Most prominent reason in such cases of reference to nature refers to the fundamental value of life. Pursuing this fundamental value depends on our biological design which explains why certain biological facts are valuable for us. This *ontological* dependence of the fundamental value of life on the biological design is aligned with the evolutionary framework. Biological functions serve the biological purpose of sustaining our live and so do biological predispositions, because sustaining our life furthers the biological purpose of survival and reproduction of species. The fact that ultimate biological purpose of survival and reproduction overlaps with our value of life is the reason for the extensive alignment of biological facts and values, the fact that valuers largely embrace biological facts.

This explanation reveals a differentiation between two different types of purpose: biological purpose and subordinated functions and predispositions that have factual character, and

purpose in human valuing and normativity which involves evaluative and normative conceptions. Biological functions are subordinated to the biological end of survival. However, also values refer to biological facts relevant to pursuing fundamental value of life and attach different evaluative and normative interpretations to them. The purpose of biological design of our bodies is to help us pursue survival because this largely contributes to survival of our species. This explains why our biological functions, including predispositions, are suggestions concerning *how to achieve survival*. Thus, biological functions and predispositions that are subordinated to this biological end may also – but do not have to – be good suggestions for us on how to pursue life. Purpose is indeed a very relevant concept in this work and the next chapter will elaborate on this interpretation.

The value of life is so fundamental and, at the same time, is often overlooked or considered trivial. It may indeed be trivial and self-evident for ethical purposes. However, at the meta-ethical level it is an especially important point. It has to do not only with the *fact* that we universally value life, as was observed by Kant (2012) (see 2.2.2.3). This value also involves a significant *reason* that makes life valuable. It is undisputed that life has an intrinsic value. However, this is not the only reason why life is valuable. Everything we do necessarily requires us to be alive and being alive is a purely biological issue, that can only take place according to the biological design. In order to be alive, we have to respect certain biological functions, and staying alive is a necessary condition of pursuing any goals. No matter what we do, even if we reject certain predispositions, we must always necessarily respect at least some conditions of the overall biological framework that keep us alive. Thus, it is rational to respect our embedment in nature according to the biological design, at least as long as it upholds our life functions. Life and survival have a fundamental value for us; we purposefully seek it and/or observe it in pursuit of other values, by respecting at least some elements of the biological design. Next to the intrinsic value of life, this also shows its *instrumental value*.

In normative terms, intrinsic and instrumental value of life, and its dependence of biological design, *warrant* references to nature. This constitutes a normative understanding of our embedment in nature, because it concerns *reasons* why certain elements of the biological design are valuable to us. This basic fact about how we are embedded in nature and how we value this embedment due to the fundamental value of life is frequently overseen. It is very basic and self-evident for humans to act according to whatever furthers their live. Moreover, we do not pay much attention to this fact because we also have values which do not seem directly biological. They concern life goals, career, education; sometimes they are highly

sophisticated and sometimes very silly. However, regardless of the level of sophistication of such values, pursuing them requires respecting basic biological functions. The instrumental character of the value of life is very fundamental: whatever is good for our life is, frequently but not always, beneficial with regards to all our goals. We cannot pursue our human goals without being alive and *functional*. However, this does not mean that we should accept every evolutionary predisposition. We can intelligently and rationally choose other ways of sustaining survival and pursuing our goals than those suggested by evolution. Moreover, even if it is rational to value life for both intrinsic and instrumental reasons, we can autonomously choose to not value life. We have a complete autonomy and ability to oppose embedment in nature entirely.

It is also recognised by many other authors although its metaethical implications are rarely pursued. John Finnis lists it as the first basic good (Finnis, 1980). In the quote discussed in the introduction, Hart refers that survival has a "special status" and a *reason why law and morals have a certain content* ("In considering the simple truisms which we set forth here, and their connexion with law and morals, it is important to observe that in each case the facts mentioned afford a reason why, given survival as an aim, law and morals should include a specific content") (Hart, 1961, S. 189). Woodfield explicitly recognizes that survival, or life, is valued not only intrinsically but also instrumentally. It is the *condition* for setting any other goods: "indeed it contributes to any goal that S might have, *via contribution it makes to survival*. Being alive is a causally necessary conditions of behaving, and S has to behave if it is to achieve any goal." (Woodfield, 1976, S. 125). The author makes this statement in the context of searching for an understanding of the fundamental intersection between our valuing and biological functioning. Woodfield states that "this provides another sense in which life is a privileged member of the class of biological ends. The others do not causally contribute to it; they are manners, modes and enhancements of it" (Woodfield, 1976, S. 134). While Woodfield refers to this as a biological end, the author does not only refer to it as a biological end, as seen from the scientific perspective exclusively, but rather as a biological end to which we also attach value.

A similar observation is made by Foot. The author highlights the value of life as central to her theory. It is the reason why her theory links biological design with normative conceptions. This is clear in the quote: "there emerges here the special link, mentioned but not explored by Thompson, between his 'Aristotelian categoricals' and teleology in living things. Aristotelian categoricals are propositions having to do with the way that certain features appear or that

certain things are done in organisms of a given species either by the whole organism or by their characteristics or parts. But, speaking now for myself rather than for Thompson, I should say that to obtain the connection between Aristotelian categoricals and evaluation another move must be made. I should say that in plants and non-human animals these things all have to do, directly or indirectly, with selfmaintenance, as by defence and the obtaining of nourishment, or with the reproduction of the individual, as by the building of nests. This is 'the life' characteristic of the kind of animal with which the categoricals here have to do. What 'plays a part' in this life is that which is causally and teleologically related to it, as putting out roots is related to obtaining nourishment, and attracting insects is related to reproduction in plants." (Foot, 2001, S. 30-31). "Teleology in living things", in Foot's terminology, refers to a purposeful biological design of living things, as a subject-matter of science. In this quote, Foot is outlining the connection between the good of organisms and their biological design relating to "the life" as the fundamental end or goal and the fact that biological design helps to "directly or indirectly" via self-maintenance, defence, obtaining of nourishment, reproduction or building of nests, to support it. Thus, Foot is highlighting the value of life as the reason for the connection between the *biological design* of organisms and *the good of organisms*. In other words, she links it to the parallels between biology and valuing.

The fundamental value of life has a special character not only because it is self-evident and universal. As discussed in chapter 2, Kant seemed to believe that this fundamental value *does not need a justification*. In addition, the argument here also highlights that there is an important *reason* hidden behind this value, and the reason refers to the biological embedment in nature. The point about survival, or the value of life, is important in order to explain why we chose to respect our biological anchoring. This reason warrants references to nature by valuers and explains why biology is so relevant to our valuing. It further elaborates the importance of ontological characteristics that explain the relation of biological facts and values.

4.6.2 Autonomous and rational choice: accepting and rejecting biological predispositions

The normative understanding of our embedment in nature highlights that references to nature are an autonomous and rational epistemological exercise performed by valuers. Reasoning models in chapter 3 showed that we frequently value biological functions and predispositions when we autonomously decide that these elements of the biological design help us pursue the fundamental value of life and other goals alongside of it. This results in embracing functions and predispositions by the valuer. This phenomenon of parallels between biology and values is also referred to as the "alignment of facts, values and norms".

From a descriptive perspective, since survival of individuals is aligned with the evolutionary purpose of survival and reproduction of species, also biological predispositions are generally designed to foster life. This overlap between the evolutionary biological end and the value of life explains why we evaluate biological predispositions as good and why we frequently embrace them. Generally, biological design offers contributions to individual survival and, thus, to the value of life. There are endless possibilities for evolution to design biological functions. Sometimes, biological predispositions are designed to pursue survival in a "random" way, due to the "opportunistic" character of evolution (Ruse, 2017). We accept some of them by default, whether or not they have a strong direct influence on the value of life. For example, we accept being repulsed towards incest whether or not we can explain why. However, the fact that usually biological functions are adjusted to help us protect life explains why we endorse them. This point explains parallels between biology and valuing also observed by authors discussed in the sections above.

However, how can we explain our embedment in nature when we autonomously and rationally decide to *reject* biological predispositions? We are embedded in nature even if we reject some biological predispositions. Rejecting some predispositions does not imply rejecting the value of life or the general overarching contribution biology makes to our autonomous pursuit of goals. Our advanced mental capacities allow finding other ways than biologically suggested to pursue life along many other goals. In such cases, we simply use our mental capacities to reason about better ways of respecting the fundamental value of life than those evolutionarily suggested. Moreover, we also use our mental capacities to help us make sense of the knowledge about purposeful design of functions that sustain our life. Once we know what is biologically good or detrimental to us given the understanding of the purposeful biological design of our functions, we can use this knowledge to our biological advantage.

This consideration somewhat helps understand that valuers have a wide range of choices to autonomously decide how to act in a rational manner while respecting some elements of the biological design. Despite being embedded in nature, there are many ways in which we can pursue the value of life and some involve rejecting while others involve embracing biological predispositions. Of course, agents can also choose not to pursue life, although it is objectively bad. Fitzpatrick refers to this ability to oppose biological and evolutionary suggestions as "transcendence of proper biological functioning" (Fitzpatrick, 2000, S. 307). It is in this context, that Fitzpatrick (in like with others, e.g. Hart (1961)) rightly appeals to account for the fact that we cannot equate moral normativity with biological design but must accommodate the

role of human autonomy, rationality that lead us to "transcend our proper biological functioning, and do so in a systematic way that ultimately makes our lives our own in an important sense" (Fitzpatrick, 2000, S. 368).

It was observed earlier that there are two types of facts referring to biological functions which are addressed here. Valuing agents use these types of facts as inputs in their reasoning processes involving objective evaluations and autonomously decide to embrace or reject some elements of biological design. Different types of facts are evaluated in a different manner. The first is the fact of *having* an inclination, a presence of a function or a predisposition (such as eating, sleeping but also having social contacts). It is a type of fact which is self-evident to every animal and we know it irrespective of knowledge about it. The second type of fact is the *knowledge* about the background of these predispositions, what supports them and what is detrimental to them. This information is not known self-evidently but needs to be gained through science. These are precisely the inputs that are collected from evolution studies as well as other sciences such as medicine. The latter type of fact involves information which helps us evaluate our biological functions, predispositions and urges and decide whether they should be embraced or rejected.

Using the second type of fact as input to reasoning usually involves more *informed* evaluations. This can be as simple as a knowledge that a certain predisposition or a tendency is an evolutionary tendency. An example of this with reference to Nussbaum's analysis of anger (2016) was briefly discussed in chapter 3 (3.3.3). We can use our mental capacities to validate what biology inclines us towards in an autonomous way. Many subjective states such as desires, sentiments and impulses can be linked to our biological background and are our "default" responses but are not necessarily rational. Nussbaum's discussion showed that the knowledge – or the realisation – that tendencies to anger-based decisions are evolutionary predispositions led objectively evaluate their rationality. Rational capacities can help us find better, more moral and efficient, ways to deal with issues in order to achieve our goals. Of course, it is not only the fundamental value of life, which is a prominent fundamental standard in such evaluations, but also moral criteria.

If smoking should be understood as a predisposition, for example, in terms of addiction which certainly has a biological and evolutionary explanation, or as a psychological predisposition, similar considerations apply to the case of the smoking teenager (Callicott (2008) – see 3.3.3). In this case, smoking was rejected based on a reference to facts about knowledge about our biological design (that smoking is detrimental to human health). Thus, the predisposition to smoke, if understood as having a biological background, is one that does little to further

survival. In fact, it is detrimental to survival, as it is detrimental to health. If the agent values, health and survival, they would evaluate smoking as bad, based on this knowledge. Thus, both from the perspective of biology and from the perspective of the agent, smoking is detrimental and bad (in fact, a predisposition that leads to smoking, such as physical or psychological addiction, is an example of a *deficient* biological function, because it does little to further the biological end; evolution theory accommodates such examples). It is worth to highlight the use of two different terms to evaluate biological functions from the perspective of biology and from the perspective of values attached to those functions by an agent. Biological functions from the perspective of biology, as a subject-matter of sciences, do not axiomatically involve values. Thus, it should be avoided to use the value-laden term "bad" in a context where agent's evaluation is not necessarily present.

Both these examples, and especially the cigarette-smoking, demonstrate very well that even when agents reject predispositions, the fundamental value of life is still valid. It is against this value that evaluations of predispositions as good or bad are conducted with help of information about our biological design, such as the information that smoking is detrimental to human health. Thus, even when we use our advanced mental capacities and reject biological predispositions, we are still respecting the fundamental framework of our embedment in nature. With the studies such as medicine or psychology, we autonomously want to find out more about the biological design and what is beneficial and detrimental to it because we are aware that it is objectively good for us to nurture our biological functions. We seek further knowledge about our embedment in nature in order to reinforce our pursuit of values and norms. In case of cigarette-smoking or anger, we reject predispositions because we intelligently find better, more efficient in case of the former and more moral in case of the latter, ways to act. In case of cigarette-smoking, fundamental value of life is clearly the underlying goal. In case of anger, fundamental value of life is pursued indirectly, through pursuing a justice system that ensures a high quality of cooperation.

This normative relevance of biological design to human valuing and normativity can to a large extent be useful for authors such as Ruse (2017), Foot (2001) or Finnis (1980) in helping them justify their references to nature. Indeed, as mentioned previously in this section, Foot does involve such consideration with reference to the fundamental value of life as a reason why certain biological characteristics are valuable, thus can be interpreted as goods, for organisms. This move would be beneficial for Ruse's position. The author argues that biological characteristics are good for organisms, and even refers for them as values. While he does not explicitly state why they should be interpreted as goods, clearly a reference to the fundamental

value of life would provide the necessary link. Finally, also Finnis argues that certain facts about human nature are basic goods that are simultaneously natural and rational. Life is first basic good in his theory. The arguments for the normative relevance of this biologically-anchored value would also be applicable in Finnis' case.

The emphasis on human autonomy and reason leads to highlight that moral attitudes and values towards which we are predisposed are not *forced* upon us. We *choose* to either actualize them or find better ways to act, even within the overall biological framework. As Ruse states: "this is all there is to the biological story of the evolution of human morality. No one, least of all an evolutionary biologist, wants to deny that the human cultural dimension takes off, and leads to effects which *do not tie in directly* to biological advantage" (Ruse, 1984, S. 11 - 12)[32]. We can, and we do, make independent moral decisions that may not be in line with biological predispositions. Our valuing is not always aligned with biological functions or predispositions because these biological suggestions are not always rational. They can be irrational, or bad, with regards to both the pursuit of the value of life or other standards, such as moral ones in case of Nussbaum's anger (2016). It is the role of reason and other advanced mental capacities (which Ruse above refers to as "human cultural dimension") to help us decide whether biological predispositions should be actualized or whether they should be resisted. However, even in many cases of resisting them, we largely respect the biological framework.

This philosophical explanation is aligned with a biological understanding of advanced mental capacities because advanced mental capacities are an evolutionary tool to help us ensure survival, even if it means rejecting certain predispositions. The capacity to reflect, think rationally and chose our actions autonomously is one that human species have developed through evolution. Rationality is natural for humans and this is something that Kant was aware of as well. As Elisabeth Vanhaute writes, Kant thought that "(…) each human being is born with a predisposition that basically does not change, and this biological foundation must be developed further through creative interventions for which the human being is responsible" (Vanhaute, 2011, S. 160 - 161). In other words, we have an "inborn predisposition to reason", similar to predispositions of a certain sort of wheat to develop thicker skin in cold climate. However, this predisposition needs to be cultivated and developed through our action.

Advanced mental capacities indeed give us a great autonomy and capacity to have meaningful and conscious lives. Thanks to them, we assume the ownership of our lives, even though our

[32] Emphasis added; Ruse`s words should not be interpreted as suggesting that they are not linked at all to biology (only indirectly so).

lives are embedded in nature. Being rational, autonomous and deciding against biological predispositions is natural for humans, also from the perspective of evolution. However, Kant has made an important observation above. In line with Putnam's emphasis on the quality of reasoning, Kant is aware that human reasoning is fallible. While the possibility to make our lives as meaningful as possible is given by evolution, the actualization of this possibility is dependant purely on our autonomous choice. Our capacities need to be trained, developed, cultivated and we chose how to use and nurture them. While reason is a powerful tool, it is not infallible. We must learn how to operate it and it is a life-long exercise. The better we learn it, the more autonomous and meaningful our lives can be.

Thus, the normative understanding of our embedment in nature highlights two elements. Firstly, it provides reasons why we should respect embedment in nature due to the fundamental value of life, i.e. why it is good for us. This applies both to cases when agents embrace and when agents reject biological predispositions. Secondly, this account adheres to the recognition of the epistemological process of valuing and formulating values as an autonomous exercise of agents. Such considerations greatly complement the descriptive account showcasing the manifestations of out evolutionary, biological heritage which indicates the ontological understanding of the relation between biology and valuing. The normative understanding explains why the embedment in nature is actually *relevant* in the autonomous exercise of valuing and formulating norms.

4.7 Conclusion

The account of our embedment in nature, which is explored both descriptively and normatively with reference to the evolutionary biological heritage, exposes deep relation between biological facts and our valuing and normative exercises. This relation has ontological character because it refers to what characterises these concepts and why and how they are related in terms of their content. The two perspectives capture why we *tend to* refer to nature and embrace biological functions and predispositions, as well as why we *should* (or should not) do so. In both cases, the explanations are linked to the evolutionary biological design, although in a different way. The descriptive perspective outlies evolutionary framework and showcases evolutionary evidence of this design, while the normative refers to this design due to its normative relevance. From the descriptive point of view, the scientific framework outlines our embedment in nature, i.e. the dependence of our functioning on the biological design that, from a normative point of view, is also the reason why we refer to nature. Evolutionary evidence supporting evolution

theory stems from, among others, sociobiology and the study of animal behaviour and it offers a *confirmation and manifestations* of the framework that explains the ontological relation of biological facts and values.

According to the differentiation of the descriptive-normative approach, the discussion itself has attempted to outline a blueprint to interpreting the statements of these sciences according to their descriptive character and as delineated from normative statements. Thus, the dual account allows to capture the different ways in which we refer to nature. It clarifies the nature of statements made by evolution scientists, as was demonstrated in the analyses of the framework (4.2 and, partly, 4.3) and their evidence (4.4 and, partly, 4.3). It also helps to better understand such references made by philosophers as was mentioned and will be elaborated in chapter 5, 5.2.

While the account of evolution theory and its sociobiological and animal-behaviourist studies provide a scientific framework and evidence *confirming* our biological background, they are not the core phenomenon interesting for philosophers. The real point of interest is why autonomous agents choose to respect certain functions, actualize certain predispositions and reject others. Thus, in this context, it should be highlighted that life has a fundamental intrinsic and instrumental value and that sustaining this value depends on biological design and respecting of some biological functions. We *choose*, based on reasons and values, to embrace this embedment in different ways, whether by accepting or rejecting evolutionary suggestions ("embedment in nature" should, thus, be understood as referring to the fundamental value of life).

Using terms from chapter 2, the normative perspective explains why we refer to biological facts as objects and why it is rational. Thus, is relevant to understand objective values, as will be discussed in chapter 6, 6.3. The normative perspective involves a reference to the fundamental value of life which "embeds" humans in nature. It shows that biological design is relevant to our valuing because it contributes to our good. This reveals a very fundamental, ontological, grounding of our action, decision-making and reasoning (both descriptively and normatively) in nature.

Evolution theory explains our biological background. In line with this theory, it is an important observation of ontological character that the biological design defines the conditions for sustaining *life* which is fundamentally valued and valuable for us. The fundamental value of life, and its dependence on the biological design, warrants references to nature. Within this account, the epistemological aspect of valuing and formulating norms, its dependence on the

valuer's autonomous exercise, is respected thanks to highlighting the normative approach against the descriptive one. As a result, there is no need to argue, as is done in dualistic contexts, that human is "unnatural" in order to underline the uniqueness of human nature. It is possible to differentiate facts, values and norms at the epistemological level in the process of agent's reasoning, without having to deny the presence of the ontological connection between facts and values. Humans are embedded in nature and this affects how we value. However, this does not change the fact that it is agents who reason and value autonomously.

In order to pursue life, we even learn more about our biological background from sciences such as medicine in order to support our biological function and minimise what is detrimental to them, even if it involves rejecting some predispositions. The fact that biology offers contributions to our pursuit of values and, most evidently, to the value of life, is the reason for the presence of strong parallels between biology and our valuing. Biology is designed in a way that is beneficial to individual life because supporting individual life contributes to its ultimate end of survival and reproduction of species. This explains why we so frequently evaluate biological functions and predispositions as good and why we embrace them. Thanks to this explanation, one can understand why the alignment of facts, values and norms (or any embracing of the embedment in nature) is not an accident but results from the autonomous choice of the valuer.

In fact, the concept of purpose is very relevant to understanding this phenomenon of alignment of facts, values and norms as it helps capture the overlap between the fundamental value of life and the biological end of survival. The concept of purpose is extremely relevant as both biological design and human valuing, normativity and action in general have purposeful nature. In this context, many philosophers struggle to capture this phenomenon and striking the balance in referring to nature and respecting the autonomy of the agent. Thus, in the next chapter, the proposed approach will be applied to such discussions with reference to the concept of purpose.

5 References to facts in valuing and delineation of facts and values from the perspective of purpose

The two previous chapters have elaborated on the two proposed perspectives for understanding the relation between biological facts and values. The two perspectives provide an account of the relation characterised by 1) respecting the logical and epistemologically-relevant delineation between them as types of concepts (epistemological perspective, chapter 3) which highlights the role of autonomous agent in valuing while 2) acknowledging and explaining

references to nature, or the parallels between biology and valuing (alignment between fact and value), descriptively and normatively (ontological perspective, chapter 4). In those discussions, it was impossible to avoid reference to purpose. Such references were present in the examples discussed and they referred to either biological design and biological functions of organisms, or to purpose in human decision-making characterised by reasoning and valuing.

The use of term "purpose" as opposed to "teleology" is intentional and should reflect a more neutral account that does not necessarily bind the two types of purposes but recognizes their differences. In contrast, the term "teleology" may be linked to theories that carry certain assumptions about how purpose and its different phenomena should be interpreted. Discussing the relation of fact and value in the context of purpose offers a more complete address to the problem. It also provides an opportunity to apply and test the suggested approach against works of other authors who struggle with the fact-value problem which pertains to the justification of references to nature. The concept of purpose is affected by issues that were tackled above but it also carries some new challenges that should be addressed.

Biological design, as accounted for by evolution theory, is a purposeful framework according to which all traits of organisms have functions subordinated to the ultimate biological end of survival and reproduction of species. Purposeful explanation is also used to account for how agents value and act. Both biology and human valuing are characterised by purposeful design, even though they are very different types of purpose. Capturing the relation of fact and value in the context of purpose is characterised by the very same features as outlined in chapters 3 and 4. This involves a recognition of a logical and epistemological delineation of phenomena characterised by facts and values as well as a recognition of their ontological relation.

The present chapter will apply the developed understanding of the relation of fact and value. First, the recognition of the logical and epistemologically-relevant differentiation of factual and evaluative/normative phenomena will be discussed in the context of differentiating *types of purpose* (5.1). This differentiation is a consequence that follows the differences in logical nature and epistemological functions and characteristics between facts and values as types of statement. In the context of purposeful design of biology and purposeful design of human action and values, this leads to a respective differentiation between these concepts as types of purpose.

As will be outlined in 5.1.1, the type of purpose pertaining to human action, referred to as "human" purpose, is characterised by normative statements. It is a product of another type of epistemological process. Rather than discovering laws of nature, it involves formulation and production of values and norms with involvement of reasoning by human agents. It is produced by human valuing, reasoning and normative exercises. It contains not only values, reasons but also references to facts in evaluative and normative contexts. Reasoning models discussed in chapter 3 are all examples of such type of purpose. In contrast, as demonstrated in 5.1.2, biological purpose is characterised by descriptive statements produced by science and its empirical methods. The concept of purpose in biology has purely factual characteristics and is the subject matter of science. It involves description of empirical statements as knowledge gained from sciences. It should be entirely separated from the phenomenon where values attach values to such facts.

Thus, despite the delineation between the types of purpose, the discussions will attempt to capture the parallels in biology and valuing in the context of purpose. The phenomenon of agents' reference to biology can be further elaborated in the context of purpose: both types of purpose share an overlapping biological end/purpose and fundamental value which pertains to our embedment in nature and explains their ontological connection. This overlap explains why, *from our perspective,* biological functions act largely to our own benefit (are *good* for us) and, thus, why we attach values to them and embrace them as valuable. In other words, it explains and warrants references to nature.

This alignment is urges various philosophers to promote epistemologically inaccurate statements that conflate factual and evaluative phenomena ("merging" (Putnam, 2002) (Fuller, 1958), nature or natural facts "carry values" (Rolston, 1982), facts are "discovered simultaneously" with values (Rolston, 1975), etc.). The outlined approach will be validated in section 5.2, in discussions of positions of different philosophers. As was mentioned several times, the accounts of references to nature by some philosophers lack a recognition of the epistemological perspective.

Finally, the concept of purpose in this context leads to certain puzzles, some of which are linked to evolution theory (such as goal-directedness in humans and animals), while others to philosophy (the question of "designer" of purpose and values). In either case, however, they are very relevant to understanding the relation of fact and value and validating the approach proposed. As for the first type of problem, goal-directed action is characteristic not only of

humans, but also of all animals because all animals strive at certain goals. The differences and similarities in such behaviour that is guided either by biological predispositions in case of animals or by biological predispositions and values, reason and normative exercises in case of humans, are relevant to address from the perspective of the proposed approach. Thus, it is required to address the epistemological differentiation between factual and evaluative phenomena also in the context of goal-directedness, differentiating between animal and human goal-directedness, as will be done in 5.1.2.1.

The second type of problem, the question of "designer" of purpose and values is frequently addressed in the context of purpose due to the dualistic understanding of values. This issue was outlined briefly in chapter 2 (see 2.2.3.4) and it demonstrates that problems concerning the understanding of values as subjective and objective pertain also to the understanding of human purpose. This problem will be discussed in section 5.3 and it will provide a smooth transition to chapter 6 where a resulting re-interpretation of values as objective and subjective will be provided. The work in the present and the following chapter will be done in reference to works of authors who address related issues in order to contrast different interpretations and emphasise the benefits of the assumed approach.

Finally, it should be mentioned that there is an extensive amount of work behind the problem of purpose, or teleology, in nature. Nevertheless, many such issues cannot be addressed in sufficient depth in the current work. The concept of purpose is discussed only insofar as it helps demonstrate and further elaborate on the approach to understanding the relation of facts, values and norms proposed in this work.

5.1 Outlining the differentiation between biological and human purpose

Action, behaviour, human-made artefacts, biological functions and predispositions are purposeful phenomena, while goal-directedness concerns purpose in case of action or behaviour. As these are different types of phenomena, purpose in each case is different. However, this is often neglected, and purpose is discussed with reference to many different types of phenomena without differentiating them. This conflation is likely caused by the impression of their "merging" (Fuller, 1958) which is linked to reference to facts made by agents in the context of human purpose. However, even though references to facts are made in the context of human purpose, biological purpose is independent of human purpose. It is the main objection that applies to positions of different authors, as will be discussed in 5.2. In order

to apply the interpretation to the differentiation between these types of purpose, a preliminary introduction to relevant purpose-related concepts is necessary.

Purpose is often discussed with reference to Aristotle's famous four types of causes which helpfully frame its different elements. The starting point is a model of a purpose *of an object* (artefact), made by a human. The four types of causes that characterise it are: efficient, material, formal and final causes. They can be explained on the example of a statue: "efficient cause" is the sculptor or modeler of the statue who decides on the design; "material cause" is the material out of which it is made; "formal cause" is its actual shape and the "final cause" is the ultimate purpose of the statue – the value, for example, commemoration of an event or a person (Ruse, 2017). The four-causes explanation applies in case of artefacts made by humans which have the purpose of furthering human goals, as an extension of human action. Artefacts are tools to human goal-directed, value-driven purposeful action. However, this explanation may also be applied to goal-directed action itself, not just to artefacts as tools of this action. Efficient and final causes are referred to as the *how* and *why* aspects of action. How action comes about, by means of what, or whom and why, what is its ultimate purpose, goal and value that motivates it.

It is important to note that this is a human-based model and it defines the paradigmatic understanding of purpose as involving human agents. Despite this, such interpretation is generally applied to other instances of purpose. Both goal-directed action and decision-making, including that of human agents, and biological design of biological functions, are usually discussed from the perspective of this Aristotelian model (Woodfield, 1976). Indeed, Ruse claims that in the case of nature, Aristotle speaks of only two types of causes: efficient and final (2017). This suggests that biological purpose is perceived from the perspective of human purpose and this can expect to raise some misconceptions.

This human-based model is specific because it involves a concept linked to the epistemological exercise of formulating values and purposes, i.e. the concept of designer. Clearly, this value-related concept cannot be suitable for characterising biological purpose given the lack of values in biology (unless they are assigned by an agent). The concept of designer is classically discussed with regards artefacts; however, it can also validly apply to actions. For example, a chair has been designed and manufactured by a carpenter (efficient cause) for the purpose of providing a furniture that allows resting (final cause, although this is only a proximate final cause as we can enquire further about the purpose of resting, etc.) (Perler & Schmid, 2011). While the design is referred to as the formal cause, it is the carpenter who ultimately decides

on the design and on its purpose and carries it out. Thus, ultimately, the process of designing and manufacturing by the carpenter is the efficient cause and the carpenter is the designer because they decide on the design and the purpose of the chair.

In terms of action, the following example can be considered: I go to a restaurant (efficient cause) in order to have lunch (proximate final cause). In this case, the process of going to the restaurant actualises the purpose, goal, value *designed* by the agent. Values stand for goals and final causes which shows that in case of agents capable of valuing, these concepts are interchangeable. It is the agent, in this case human, who is the designer of these values and actions. This is referred to as "human" purpose precisely because human valuing is characterised by conscious and rational setting and pursuit of purposes.

Purpose refers not only to *purpose in valuing* when agents evaluate against the fundamental value with the purpose of pursuing this fundamental value, but also to *purpose in action* which pursues these values. We both value and act purposefully. In case of values, this is evident in objective evaluation where evaluation is made against a fundamental value, a "goal"[33], with the purpose of pursuing it ("goal-setting"). Once such value is set, agents pursue it with purposeful action ("goal-pursuit"). Purpose captures not only which values agents set as goals and why but also by means of which action they are pursued. Thus, models of goal-directedness emphasize also a different kind of reasoning than models of reasoning described in chapter 3. They focus not only on *what* is or should be valued, but, after having decided what should be valued, about *how* this goal is or should be pursued, by means of which actions, artefacts, etc.

An explanation of a goal-directed action is, in other words, a continuation of reasoning models from chapter 3. The typical purpose-revealing phrase "in order to" helps trace back the reasoning process. For example: I should stop smoking *in order to* protect my health, *in order to* protect my life *in order to* be able to realize my goals. Purpose, thus, focuses not only on norms regarding values but also on norms regarding *actions* that seek certain values. Indeed, the fact-value problem is also prominent in this type of cases (e.g. Fuller (1958), as will be discussed in 5.1.1). Admittedly, sometimes reasoning about values and respective actions is difficult to disentangle. Some examples discussed in chapter 3 refer not only to goal-setting but also to goal-pursuit.

As models of purposefulness (including that of Aristotle) take such human purposeful action as a paradigmatic case of purposefulness, the interpretation of human purpose or human goal-

[33] In the context of purpose, such values that are pursued and strived at will be referred to as "goals". This contrasts with "ends" which are biological functions, in itself value-free, although values may be attached to them

directedness is relatively uncomplicated. Such models accommodate it entirely because they are based on them. This human-based interpretation of purpose is also the reason why the concept of a designer seems to be a natural element of it. We clearly have the ownership of our actions, goal-setting and goal-pursuit because we decide on them mindfully in a value-laden manner. In the epistemological act of valuing, we decide, design, our values and actions. With this type of purpose as the paradigmatic case, one imports the understanding of a human-like designer with human qualities such as capacity to value, rationality, intelligence, autonomy, consciousness, etc to attempting to understand purpose in biology.

However, the purpose in biological design is different from the paradigmatically understood case of human purpose (human purpose) because it does not involve values (as it does not necessarily involve valuing agents). Some biological organisms are valuing agents, e.g. humans, while a large majority of biological organisms is not capable of valuing. All valuing agents are biological organisms but not all biological organisms are valuing agents.

This also applies to differences in goal-directedness of humans and animals. All biological organisms act or behave towards certain goals even if these goals are understood as biological functions and ends. Human goal-directed action is an instance of human purpose. Action of other organisms is driven entirely by biological functions and predispositions, although this delineation may be blurry in case of primates, as de Waal shows (2006) (see 4.3.1). Nevertheless, except for primates, there is a strong contrast that helps to grasp the difference between human and biological purpose in action of living organisms paralleling the differences between values and facts. The behaviour of non-primates is clearly characterised by regularities. It can be investigated empirically and scientifically and accounted for descriptively. In contrast, human behaviour cannot be accounted for in the same manner. Due to their autonomy and rational capacity, human agents are human designers of their values and corresponding action. Understanding human valuing and normativity requires more than just an observation of regularities. Humans, as opposed to animals, do not merely follow biological functions and predispositions. Based on autonomous, conscious and rational epistemological exercises, we *embrace* or reject them, involve values and rational judgement to our decision-making and action.

While it is obvious that purpose in biology is different, there are extremely varying approaches to interpretation of biological purpose (Perler & Schmid, 2011). Biological purpose can be accounted for in an entirely factual and scientific manner and is a philosophically uncontroversial subject-matter of science. What is perplexing to philosophers is the intersection of biological and human purpose, the fact that in human-purposeful valuing and action, agents

refer to biological design. It is not *biological purpose alone* that is puzzling, as it is accounted for by *sciences. It is rather the phenomenon that agents refer to biological design in human purpose*. To account for this phenomenon, philosophical positions tend towards either differentiate or conflate the two types of purpose, as mentioned above. For example, Woodfield (1976) and Fitzpatrick (2000) argue for differentiation (although differently, to the extent that, in effect, Woodfield's position involves a conflation), while Ruse (2017) and Foot (2001) conflate them. However, as mentioned previously, there are differences in positions even between Woodfield and Fitzpatrick as well as between Ruse and Foot. This diversity of interpretation ideas has led to complications and controversies in regards to the concept of purpose as well as a multitude of solutions involving concepts such as heuristics and teleonomy (Spaemann & Löw, 1991).

5.1.1 Facts, values and norms in human purpose

Human purpose characterises human valuing, goal-setting, and pursuit of these values in action (goal-pursuit). Human purpose involves formulation of values and norms *with reference to facts*. As models in chapter 3 showed, all these types of statements are linked with the help of reasons. In contrast to biological purpose which involves only scientific, empirical facts, in instances of human purpose, agents value and reason *about* such facts as well as formulate respective norms.

Since human purposefulness involves facts, values and norms, it is with reference to this type of purpose that statements about "merging" of fact and value (Putnam, 2002), that nature or natural facts "carry values" (Rolston, 1982), or are "discovered simultaneously" with them (Rolston, 1975), are made. These statements capture the phenomenon of alignment of fact and value, the fact that in our valuing and normative exercises that characterise human purpose, agents refer to facts, biological design that characterises biological purpose. However, they can be contested for the lack of epistemological clarity. They mask the involvement of the epistemological exercise performed by agents, even though they capture the ontological manifestation of the relation between fact and value in agents' references to nature. Indeed, statements such as this are quite frequent as answers to dualism.

In order to do show how all these types of statements interplay in an instance of human decision-making, we shall focus specifically on Fuller's (1958) statement. Fuller makes an anti-dualistic and ambiguous statement about the relation of facts and values with regards to purposeful action (goal-pursuit). The author offers an example of observing at a distance an

effort of a boy who is trying to open a clam. The boy has set a goal, a purpose, and in order to understand what this goal is, as pursued by his action[34], the observer must comprehend both facts and values that are involved into his *reasoning*. With regards to this example Fuller claims that where purpose is involved, facts and values merge. Fuller correctly observes that one can only better understand actions of the boy once learning about the boy's goal. Furthermore, it is true that the observer can help the boy achieve his goal only once they know both facts and values involved into the boy's reasoning. Based on this, Fuller writes "now it can be demonstrated, I believe, that in any interpretation of events which treats what is observed as purposive, fact and value merge" (1958, S. 69).

Looking at author's clarification that follows, the idea of merging fact and value is simply an equally ambiguous counterargument to the idea that fact and value can never be related: "In such a case the view that value is something foreign to a purely factual account - something projected by the observer on the thing observed - simply will not stand scrutiny" (Fuller, 1958, S. 69). What Fuller points out, is that both fact and value are *elements of reasoning* in a reasoning model depicting goal-pursuit: "If I can predict that the boy's attempt to open the clam by pressing it between his hands will soon be given up, it is because I know that this is not a "good" way to open clams; judged in the light of the boy's purpose it lacks "value." Here the structure of the events as they unroll - the reality of what happens through time - contains an element of value, so that we can say: "This is bad, it will not last," or "This is good, we may expect it to continue"" (1958, S. 69).

First of all, it should be clarified exactly what facts Fuller refers to. While it is clear that value refers to the value behind boy's goal of opening a clam, what are the facts in this account and to what extent are they related to biological facts addressed in this work? These can be both facts about the boy's actions, such as the act of pressing fingers against the clam, or the fact that the boy has a belief that this is what can further his goal. Both these facts concern the biological design of clams. They are related to the biological traits of clams, brought about by evolution, that characterise how clams are structured and how they open. Indeed, the more knowledge we have about the biological design and biological functions of clams, the easier we can find better ways to open them (which is probably why Fuller mentioned helping the boy fulfil his goal). This is similar to the case of smoking: when we know what is beneficial

[34] Goal-setting and goal-pursuit are often very intertwined and may be logically but not chronologically separable.

and detrimental to human health, we know what actions to undertake and what actions to reject in order to protect the value of health and life.

The boy's goal-setting has a normative power, defining what should be done in terms of pursuit of this goal. The goal is opening a clam and as such it involves a value that opening a clam has for the boy; the fact is that clams open through leveraging a knife in between clam shells (which is due to the structure of the clam developed through the process of evolution); thus, leveraging a knife in between clam shells is good and should be done (normative conclusion). Understanding such actions in the context of purpose is another way to spell out different components of the reasoning process, delineate facts, values and norms as well as show how they are aligned.

This example shows embedment in nature, although it does not concern the fundamental value of life: the furthering of the goal (whatever it is – opening a clam or supporting life) depends on the biological design. Once the boy knows how to open a clam, which is a fact pertaining to the biological design of the claim, this fact will be valuable for him. This dependence on the biological design in such a context demonstrates the embedment in nature in the normative understanding (because it explains why the boy should respect the biological design) and explains the alignment (called "merging" by Fuller) of facts, values and norms. What Fuller refers to as "merging" of fact and value (1958), is an outcome of autonomous action and reasoning where a fact (knowledge about a biological function of clams' shell) has been embraced by the valuer as valued (and/or valuable, if reasons are involved) leading to the resulting norm.

This is not an example which corresponds to cases of reference to biology with regards to the fundamental value of life. The boy has set a purpose which is not directly relevant to his life. However, the example is still useful in the context of this work because it is another type of reference to facts in valuing and provision of norms. It shows that in our pursuit of even simple goals which are not directly related to the value of life, we are still embedded in nature because fulfilling these goals depends on the biological design. This parallels the cases discussed previously as pursuing the fundamental value of life also depends on the biological design which is the reason why we value biological facts. In both cases, what is good for the agent is aligned with the biological design, even depends on it. The entire process may give an impression of "merging" of fact and value (and norm). However, the phenomenon can be explained with more precision by emphasising their alignment and highlighting the fact that they are not *given as merged* but *become aligned* based on the agent's normative exercise of goal-setting and goal-pursuit.

We can further reinforce this interpretation by discussing Fuller's answer to criticism of his statement (1958). Fuller considers the following objection: "as for the suggestion of the idea that facts and values are "merged", "it will be objected at this point, I am sure, that this whole demonstration rests on the most transparent of fallacies. It will be said that a "value" element is no more intrinsic to the facts I have recounted than it would be, let us say, if I were to observe a five-foot ladder leaning against a fifteen-foot wall. Certainly this state of affairs, as related, suggests nothing like a value judgment, yet I can say of it, "This is bad," if I assume that someone of normal stature plans to use the ladder to scale the wall, and if I provisionally accept his purpose as a valid one. The only difference between this case and my previous illustration, it will be said, is that as we watch the boy with the clam, the observation of the physical events, the perception of the boy's purpose, and our provisional acceptance of that purpose as a standard for valuing what occurs, all proceed contemporaneously, so that what is in principle distinct is here blended, thus creating an illusion that fact and value have somehow merged." (1958, S. 70). This, Fuller seems to believe, would be an objection of a hypothetical advocate of projectionism. A clue to this interpretation is provided by Fuller's description of a position that value is "something foreign to a purely factual account - something *projected* by the observer on the thing observed"[35] (1958, S. 70).

Fuller's hypothetical critic states that there is an illusion of merging because the boy's purpose and action of opening a clam are taking place at the same time. Fuller takes this objection about the temporal separation of facts and goal-directed action to be an argument against merging of fact and value. After all, according to the philosopher, a point in time will come when somebody will use the ladder to further their purpose and will perform the action of climbing it. Facts can exist independently of goal-directed value-laden action. This is entirely true, just as biology and its design is present irrespective of the values and goals that agents attach to it. Fuller considers this to be a criticism because he does not clearly distinguish that goal-setting and goal-pursuit is epistemologically dependent on *agent's act*. Facts and values are separate phenomena and they become elements of the phenomenon of an agent's goal-directed action *upon agent's act*.

Also Fuller's example of criticism is somewhat unclear with respect to what the author understands as facts (as it is unclear about what he understands as "merging"). Facts involved are facts concerning laws of nature (biology and physics) about how our biological design allows us to use the ladder, with reference to our muscles and the presence of gravity; also there

[35] Emphasis added

is a fact that describes the occurrence, such as the presence of the ladder. Fuller is very ambiguous about "merging of fact and value" and he also fails to distinguish what facts are relevant to valuing and normativity in what way. Nevertheless, Fuller correctly highlights the fundamental relation between facts and values present also in this example: in order to pursue the goal that climbing the ladder aims at, the agent must respect biological and physical laws. These natural phenomena define how the agent can pursue their goal which makes certain natural facts valuable and valued for the agent.

Fuller answers to this criticism as follows: "This argument ignores the fact that when we are dealing with purposive action projected through time, the structure that we observe, recall, and report lies, not in any instantaneous state of affairs, but in a course of happening, which can be understood only if we participate in a process of evaluation by which the bad is rejected and the good retained. If I look over the shoulder of a mathematician working on a problem beyond my comprehension, I cannot predict or control what he will do, nor will I be able to give more than a trivial account of what I have observed. In such a case, as in that of the boy and the clam, the "fact" of the event can be understood only by one sufficiently capable of evaluation to know what is happening when a good thing is embraced or a bad one rejected" (1958, S. 70). In his answer, the author emphasises the fact that *in understanding* what is happening, we necessarily must refer to both fact and value, which is why he says that they are merged. Fuller refers only to the fact about the presence of a ladder, but he does not enquire further into biological types of fact which clearly are present and very important to the phenomenon of "merging of fact and value" in both of his examples.

It is correct that in order to understand purposeful action, we must consider all elements that are relevant to reasoning about what should be done: the facts, values and reasons that lead to the normative goal-pursuit. If we consider the fact that all these types of elements are linked together to produce normative conclusions that describe the action, in this way facts and values could be understood as "merging". While this statement may be aligned with the presence of the ontological relation of fact and value, especially in contrast to dualism, it is too vague to account more precisely for how this (ontological) relation between fact and value can be understood. In addition, the statement of merging also does not capture the logical/epistemological delineation of facts and values, which involves recognition that valuing and normative purposeful behaviour depends on valuer's agency. It masks the fact that fact and value need to become by a step to be taken by the valuer in order to be "merged" (as discussed in chapter 3). They are not merged without this agency. Climbing a ladder is good for someone because someone values and reasons in a manner that *makes* climbing a ladder good for them.

Consequently, what a projectionist could truly object is the fact that, in order for all happenings in Fullers examples to take place, somebody *necessarily* has to confer (project) a value, thereby setting a goal that leads to purposeful actions. This is a point that is difficult to capture in Fuller's account. Projectionism emphasises the importance of the epistemological act of conferring values by a valuing agent. This characteristic of the concept of value differentiates it from the concept of fact. In a parallel manner, it differentiates human purpose which involves references to facts, from mere factual account, such as the account of biological purpose alone. Human purposeful action strives at a certain goal and this process involves references to facts not because the agent has identified them as valuable and embraced it as valued.

Thus, also from this perspective, the diagnosis of the problem involved has to do with the fact that Fuller's (1958) analysis oversimplifies what happens between facts, values and norms (not mentioning fact that Fuller is unclear about what type of facts he refers to which makes the argument even more confused). While his argument is correct in highlighting the manifestation of the ontological relation of fact and value: the alignment of facts, values and norms, his account is imprecise as it fails to highlight the importance of agent's autonomy in realising this alignment. This, once again, highlights the necessity of differentiating two levels of the relation between facts, values and norms as proposed throughout this work with regards to how we value, otherwise referred to as human purposefulness.

Except for offering this first discussion of the application of the approach, the analysis of Fuller's example aimed to *elaborate on the concept of human purposefulness*. The examples helped to highlight that not only values, norms and reasons are present in purposeful valuing and action but also *references to facts about the biological design*. It is the phenomenon of *alignment* of facts and values present in this type of purpose, or their "merging" as Fuller states, not biological facts alone, that is controversial.

5.1.2 Facts in biological purpose and delineation from human purpose

The delineation between human purpose and biological purpose is based on the logical and epistemologically-relevant delineation between facts and values, as outlined with the help of Searle (1964) (see 3.3.1). Human and biological purpose are concepts characterising the purposeful nature of the phenomena of human action and valuing (human purpose) and biological design of organisms (biological purpose). The former is characterised by presence of values and norms that refer to facts. The latter is characterised by the presence of facts and factual descriptions alone that capture regularities.

Biological purpose is the subject matter of science. This scientific framework accounting for the type of purposeful design of biology has already been outlined in chapter 4. Biological purpose is governed by regularities, captured by laws of nature and accounted for descriptively. This type of purpose is factual, as facts can reflect its regular phenomena.

It is not necessary to agree which type of purpose should be the paradigmatic case of purpose. What is important, is to highlight what differentiates them. Agent's autonomous and rational evaluative and normative exercises lead to attaching values and norms to whereas values and respective norms are not present in biological purpose. Values and norms can be attached to them by an agent; however, this creates a different type of purpose, human purpose. Human purpose is created in this epistemological exercise. Biological purpose exists ontologically irrespective of agents. Biological purpose also does not change its ontology if values and norms become attached (again, this act only creates a new type of purpose).

Biological design has its functions irrespective of humans and their intentions. Biological functions remain the same irrespective of which functions agents *assign* to them. Similarly, humans can assign functions to biological objects which are different from their biological functions. For example, Woodfield (1976) notes that biological purpose contains objective elements and objective functions, i.e. functions to biological organisms that are there irrespective of what values and intentions we "project". Woodfield argues that it would be questionable to claim that when spiders weave webs, they design it with a purpose but in a metaphorical way. The author, thus, states that "nearly all living components have functions in this sense, regardless of whether they serve the purposes of any beings other than their owners" and "(…) the sense in which organs have functions cannot be related directly to human intentions, nor indeed, if such be admitted at all, to animal intentions" (Woodfield, 1976, S. 28).

Indeed, the concept of a *function* puzzles philosophers. Next to Woodfield (1976), a good example of this is also Fitzpatrick (2000). It is possible to speculate that the reason for this is the fact that it is a relative term: a function is always defined with respect to some end or goal. For example, Fitzpatrick says that heart's biological function is to pump blood to the body. But heart may have *other functions for us*. For example, the noise made by heart's pumping of the blood is useful in helping doctors diagnose heart problems (Fitzpatrick, 2000). In this example, we, agents, ascribe *other* functions to such biological elements than their biological functions. Similarly, we may ascribe the function of rain to clean the streets. However, it cannot be said that, in nature, rain exists in order to clean the streets (Fitzpatrick, 2000). Fitzpatrick asks

rhetorically if any finding about natural selection would change our perception of heart's function *for us*, as in the *value* it has for us. Indeed, my heart beats in order to support survival and reproduction of *my species*. I value that my heart beats for a *slightly* different reason: because it allows *me* to survive and fulfil my life goals. Any yet, it beats irrespective of this. The biological function seems to be antecedent to the values attached and this is part of our embedment in nature and the reason why the connection of biological facts and values is of ontological character. Biological functions and predispositions are first and foremost evolutionary adaptations, they do not axiomatically involve values, although they can *become* valued.

Based on such examples, Fitzpatrick attempts to define different ways in which one can use the word "function". The philosopher engages in a fine-grained analytical exercise is to capture its use and meaning in the context of both human decision-making and biology. However, a basic differentiation that is valid also for his analysis concerned understanding the term "function" either from the perspective of evolutionary biological design or from the perspective of human purpose.

We may assign all kinds of functions to things that have a certain *biological* function. We use nails and hair as beauty accessories even if they have completely different biological functions. However, we may also embrace biological functions because they are valuable to us. We want to diagnose heart problems because we want our hearts to fulfil their biological function of pumping blood to the body. A proper functioning of the heart sustains our life which is fundamentally valuable to us as. Thus, heart has a function towards our own values as much as it as function towards the biological end of survival and reproduction of species. This is an instance of not only alignment of biological facts and values, but also of the alignment between the biological end and the fundamental value of survival and reproduction. While acknowledging this alignment, it is possible to maintain a differentiation between biological purpose present in the nature and human purposes defined by agents. So, just as one can apply the differentiation between biological and human purpose, so it is possible to differentiate different ways in which one can use the term "function".

5.1.2.1 Outlining the differentiation between biological and human purpose: goal-directedness in animals and humans

The concept of goal-directedness is another way to capture purpose. It concerns purposeful action or behaviour, which otherwise is also referred to as goal-pursuit (according to the terminology used in this work). It is a special concept as it offers interesting comparisons

between human and animal action and behaviour. The similarities and differences that the concept highlights are relevant to understanding the fact-value relation. The considerations discussed in sections above apply in a similar manner to the concept of goal-directedness. It offers a further opportunity to apply and elaborate on the proposed approach with respect to other authors.

Goal-directedness is interesting because it applies to action of animals which is based entirely by biological functions and biological predispositions, as much as it applies to human autonomous and rational action that involves evaluative and normative exercises. Behaviour of most animals is characterised by regularities and can be studied by laws of nature and it is an instance of biological purpose. In contrast, we attach values to our goals based on reasoning and many other processes of exercising of our mental capacities which is what characterises the concept of human purpose. As a result of this autonomous, conscious, and complex decision-making, our actions can be very diverse and unpredictable. Animal goal-directedness can be captured with a descriptive, factual account, as examples in 4.3.1**Error! Reference s ource not found.** showed. Human goal directedness may involve references to facts, but it is fundamentally characterised by attachment of values and reasoning as Fuller's (1958) examples of the boy and the mathematician showed. Animal behaviour is generally predictable which is a strong contrast to human behaviour. If there are any psychological laws that attempt to capture it, there is a poor chance that they will apply to behaviour of all humans in the same way. This delineation of animal and human goal-directedness follows the delineation of facts and values because the human behaviour involves epistemological exercise of formulating values and norms which is highly individual.

In many cases, it is unclear how authors delineate goal-directedness, in case of action fully characterised by biological functions and predispositions, from goal-directedness involving autonomous valuing and reasoning. Philosophers tend to aim at developing universal accounts of purpose-related concepts and this applies also to goal-directedness. Rather than differentiating between types of goal-directedness, the tendency is to formulate different criteria for their models of goal-directedness which make them applicable to different types of organisms. As a consequence of this ambition, such models are frequently very general.
For example, according to Thomas Nagel (1953), the most essential element of goal-directedness, is the mode of behaviour that manifests striving towards a *certain* goal, rather than being random. The second part of this model, in a simplified way, is what Woodfield

(1976) refers to as "plasticity". It is the fact that under changing circumstances that create obstacles, the goal-directed being would do whatever it can to pursue its goal by compensating for different changes. Nagel's concept as presented by Ruse (1973), clearly suggests a very wide definition of goal-directedness. Certainly, even simplest organisms can be counted as goal-directed as they have certain such properties, even if these are very simple functions, such as processing energy or reproduction. Plasticity is also accounted for in simple organisms; for example, plasticity towards reproduction can be understood as the phenomenon when bacteria become immune towards antibiotics.

De Waal refers to this goal-directedness and plasticity in terms of "normativity", which he defines as "adherence to an ideal or a standard" (2014, S. 187). They may strive towards an ideal in different circumstances, but their behaviour is entirely regular. For example, the fact that spiders rebuild their webs is for de Waal a manifestation of the fact that animals are "guided by a template of how the structure ought to look" (2014, S. 187). This means that animals "treat these structures in a normative fashion" (de Waal, 2014, S. 187), although not via normative *judgement*, as the one characteristic of human reasoning. De Waal's "normativity" in animal behaviour stands for unconscious following of biological predispositions, which can lead to no deviations from those standards. It differs from human goal-directedness, although it is a type of goal-directedness. De Waal recognizes that while animals may not feel obligations to certain behaviours and may not have a conception of such structures but, they still act with a purpose, towards a goal.

Different concepts analysed by Woodfield (1976), as well as his own concept, all account for at least some animals being capable of goal-directedness, while others include further organisms. The two most characteristic elements as evident in Nagel's model are prominent: goal-directed mode of action and plasticity towards the goal, although even these two main components can be interpreted very differently (Woodfield, 1976). In his own concept, Woodfield focuses on understanding goal-directedness as an internal process of an organism. Woodfield suggests that humans are a paradigmatic case of goal-directedness, although he argues that his model accounts for all types of goal-directedness and can also be applied to some animals. Woodfield's definition involves referring to *beliefs* and *desires*, which explain plasticity with regards to a goal. Despite referring to beliefs and desires, the author believes that goal-directedness is *intentional*, but *not necessarily conscious*. He captures this in the following model: S did B intentionally because S wanted to do G and believed that B->G. The element of a goal-directed mode is reflected by the desire, the part "S did B intentionally" and the plasticity is conveyed by the belief "believed that B->G" (1976) because it captures that

organisms flexibly adjust their actions according to whether, in their belief, will help them pursue the goal.

An example used by Woodfield to demonstrate desires and believes involves goal-directed behaviour of a rat. The rat swims towards the bank of the river that is closest to food. It does so as it (non-consciously) "desires" the food and "believes" that swimming towards the bank of the river will enable it to obtain the food. The rat has an intention, despite the fact that it is not a conscious intention. Woodfield calls this an internalist theory, according to which this purposeful goal-setting and goal-pursuit is inherent to the organism, as its internal state. Such an internalist theory clearly makes a reference to the biological design of organisms because such goal-directedness is inherent to them (1976). However, does the rat desire and believe like humans do (because Woodfield's paradigmatic case is human goal-directedness), or does it only act *as if* it desired and believed as humans do? Certainly, the second option seems more plausible which suggests that a more explicit delineation between humans and other animals would be appropriate.

Indeed, the idea that animals *intentionally* strive towards certain goals and act *as if* they had desires and beliefs like humans leads other authors to underline similarities between animals and humans. Animals are believed to be intentional because they *manifest* needs, that are interpreted as values, and act towards them as goals. This is true even if animals do not judge or evaluate their actions because they are not conscious of them and do not have the mental capacities to do so. Such is precisely the position of Rolston. Rolston claims that animals such as lemurs cannot evaluate their behaviour but are able to "self-valuate": "Lemurs cannot self-consciously evaluate… but they can behaviorally demonstrate what they value" (1994). For Rolston, animals can "demonstrate what they value" with their behaviour, as their actions pursue whatever helps them further their goal (which manifests their "value"). This is true also in the case of rat; it strives towards a goal, food, even if there are obstacles along its way.

Many authors speak here of intentionality which, they claim, is present among animals. Nevertheless, intentionality is not defined by any of them. It is a term that is subject to complex philosophical discussions, as, for example, Anscombe (1963) shows. Indeed, according to her understanding of what it is to have intentions, human intentionality cannot equal intentionality in animals. This follows her account of rejection of Wittgenstein's "natural expression of an intention" which blurs differences between humans and animals (Richter, 2020). Anscombe clearly rejects the idea that animals can express intention although she admits that they can *have* intentions: "intention appears to be something that we can express, but which brutes (which e.g. do not give orders) can *have*, though lacking any distinct expression of intention

(…) Intention is unlike emotion in this respect, that the expression of it is purely conventional, if we will allow certain bodily movements with a conventional meaning to be included in language" (Anscombe, 1963, S. 5).

For Anscombe, animal intentions which follow natural predispositions contrast human intentions and should not be understood as intentions. Anscombe is right that such "automatic" and unreflective following of natural predispositions characterises a different type of behaviour than our intentional behaviour involving meaningfulness and complexity of considerations that motivate it. Humans have ownership of their intentions and motivations[36] in the sense that they are aware of them and their grounds, unlike animals. What follows, Anscombe is also right in arguing that only humans can provide an elaborated answer to "why" they undertake certain actions or value some things. In answering "why", humans refer to their goals, values and reasons and in such answers, they manifest their deep awareness of these decisions. Anscombe emphasises *linguistic* expression because it allows humans to express those intentions. Animals cannot provide such answers. This is not because animals lack *human* (linguistic) capacities, but because they are not capable of experiencing the same grade of intentionality, thus, they are not capable of expressing it, whether in linguistic or other type of language Certainly, also *behavioural* expression of animals of which Rolston (1994) speaks does not manifest as much awareness and ownership of intentions.

All in all, the topic of intentionality is very complex and this brief reference to Anscombe (Anscombe is discussed again with reference to Ruse in 5.2.3) should only show that there is a *difference* in the type of human and animal intentionality and respective goal-directedness, although both concepts are to some extent applicable to humans and animals. One may concede that there are certain similarities in goal-directedness between humans and animals. Both animals and humans act in a goal-directed manner as both manifest purposes of their action. However, the similarities end here. In terms of specific characteristics of goal-directedness and, particularly, intentionality, there are important differences between humans and other animals. Applied to humans, Woodfield's (1976) model is too vague. In his formulation, the only present elements concern what is valued (desire) and how to achieve it (belief). It fails to highlight how the values are formulated and, particularly, it neglects the role of reason in judging objectively what is valuable. Nor is it anywhere close to capturing the subtleties of human intentionality, as elaborated by Anscombe (1963). While it captures the fact that there are goals and that they

[36] Anscombe (1963) draws a differentiation between intentions and motivations, i.e. grounds or reasons for action.

are pursued, it has a blind-spot towards the complex process of formulating these goals and reasons behind it. This is significant because humans do not just follow desires or predispositions and any kind of beliefs about how to achieve them but rationally reflect on them and autonomously decide what to do and how to it.

In case of human purposefulness that involves valuing and reasoning with relation to facts, this characterisation can be substantially developed. First, "S wants to do G" stands for goal-setting. It can involve either subjective evaluation based on subjective states of a subject, or objective evaluation which is supported by reasoning. Goals can be formulated based on urges and inclinations driven by subjective states such the curiosity-driven desire to open the clam in the case of Fuller's boy (1958). Alternatively, these can also be goals that were formulated based on complex processes involving both subjective and objective evaluation, reference to a multitude of facts and reasons but also emotions, such as, perhaps, in the case of the mathematician. Moreover, S's *belief* about how to achieve a goal, i.e. goal-pursuit, may also involve knowledge and reasoning. It can be either trial-and-error action of Fuller's boy or an evidence-based and more sophisticated reasoning that involves knowledge and inquiry and careful reasoning in the case of Fuller's mathematician. Thus, human purposefulness in case of humans is a complex interplay of facts, values, and reasons. It involves reasoning about what should be valued, how to achieve what is valued and valuable given the facts.

Presumably, Woodfield's model is so vague in the context of its application to humans because it has been intended to be applicable also to animals. In order to be applicable to non-humans, it cannot too strongly highlight human-specific characteristics of goal-setting and goal-pursuit. However, how valid is such a model in case of non-humans? By referring to desires and beliefs, Woodfield's model seemingly delineates goal-directedness from simple following of biological functions. Having desires and beliefs is a manifestation of higher mental complexity which is certainly absent in many types of organisms, such as bacteria. In fact, it is unclear how precisely Woodfield understands "desires and beliefs", whether literally or metaphorically. While a desire may be understood as a simple biological urge which is certainly present in many animals, what precisely is a belief? Does it involve a reflection, consciousness, reasoning and further mental capacities to be able to process this belief? Or is it just metaphorical where belief only refers to a feedback process, a biological function, that urges animals to act in a certain way, *as if* they had a belief? After all, while Woodfield explicitly states that goal-directedness must be intentional but not conscious, it is difficult to understand how beliefs could be present in non-conscious organisms. In consequence, this model that tries to capture

both human and animal goal-directedness is too weak for characterising the phenomenon in case of humans and too strong in case of animals.

The ability to reflect and reason about immediate predispositions adds a new dimension to the functioning of an organism, as opposed to following functions and predispositions without the capacity to evaluate them and *either* embrace or reject them. Organisms which simply fulfil their biological predispositions and do not objectively evaluate their actions are goal-directed but in a manner fundamentally different from our goal-directedness. Through subjective and objective evaluation, we embrace our goals because we attach values to them in an autonomous, rational manner.

Admittedly, however, this statement is somewhat difficult to apply in the case of primates thanks to evidence produced by scientists such as de Waal (2006). Evolution sciences show that advanced mental capacities are natural, and they occur in different grades of complexity among species. Given the evidence discussed in chapter 4, 4.3, it should be conceded that there are degrees between the different types of goal-directedness. Animals may be embracing needs and desires in a way more or less resembling human valuing. This means that no clear line can be made between valuing and non-valuing. Even though we can generally distinguish paradigmatic cases of biological goal-directedness and human goal-directedness following the logical differentiation between facts from values, there is also a fuzziness in nature. To deny this would be to return to an empirically untenable dualistic break between mind and body.

This fuzziness is especially pronounced considering the case of primates, as discussed above. As de Waal has shown, some of these animals are to some extent capable of an objective evaluation which confirms a continuity between mind and body. Evidence shows that this issue is not black-or-white and we are able to accept this after rejecting dualism. Thus, we should not try to provide a line but accept the fuzziness which is linked to the body-mind. From our perspective, this similarity in goal-directedness is a manifestation of our embedment in nature and the fact that also the characteristics of our species are “designed” by evolution.

Again, this observation should does not contradict the differences between animal behaviour or action and human behaviour or action. All organisms are goal directed because we are dependent on the purposeful biological design. However, there are differences in the mode of pursuit of these goals where in some cases this may involve complex epistemological processes of reasoning, valuing and provision of norms. Human goal-directedness is different from animal goal-directedness because the epistemological characteristics of valuing so strongly contrast with facts. Valuing involves embracing values based on subjective states, possibly supplemented by reasons and is highly individual. This contrast with behaviour that is regular

and does not involve values, as it can be captured by a factual account that applies not to individuals but to species.

5.2 Application of the approach: discussion of different positions

Philosophers differentiate biological purpose from purpose in human autonomous decision-making to a varying extent. It was mentioned previously that their theories can be placed at different locations of a spectrum between the primacy of empirical evidence and the primacy of philosophical concepts. Philosophers combine the two kinds of inputs – references to biological purpose *within* human purpose and references to biological purpose *on its own* - in differing ways to provide an account of purpose-related phenomena. In the present work, it is not the aim to scrutinize such theories but to discuss them in the light of the proposed approach to understanding the relation of fact and value. The main point of interest is, thus, to understand to what extent these theories recognise the necessary logical and epistemologically-relevant delineation between facts and values, in the context of biological and human purpose.

Philosophers refer to these regular laws of nature discovered by science which characterise biological purpose in many different ways, frequently calling it "natural teleology". With respect to this, Fitzpatrick states that the existence of objective functions in biology implies the existence of *objective norms* (2000). Orrego referred to this subject matter of science as "ontological normativity" (2004). These "objective norms" or "objective normativity" are unlike norms formulated by humans based on evaluative and normative exercises.

Even though philosophers are to some extent aware of the fact that biological functions can be separated from values even though values can be attached to biological functions, many do not follow this recognition through. Some even conflate them intentionally. It is evident that the "holy grail" of such analytical projects, whether they concern analysis of teleology in general or their related concepts such as goal-directedness, is to provide a *universal* explanation of such concepts. This is, for example, the aim of Fitzpatrick's (2000) analysis of purpose where he promotes the idea of "historically-informed system-oriented" account that is argued for against other accounts such as historical, ahistorical (under which he discussed Foot's "natural goodness") and etiological approach. Similar project is undertaken by Woodfield (1976), as described above, where he proposes his own account of goal-directed action developed based on the analysis of existing accounts of goal-directedness. Both authors provide in-depth discussions of existing approaches and perspectives on purpose-related concepts. Both of them also to a certain extent recognise the differences between human and biological purpose. And

yet, both provide a theory that should be applicable universally to the phenomenon of purpose. Woodfield, for example, advocates a differentiation between biological functions, such as those of organs and parts of organisms, as well as goals. However, the author does not differentiate between human goal-directedness and goal-directedness of non-human animals and organisms (see above, 5.1.2.1).

It is argued here is that the problem of these authors is the lack of consequent and/or consistent differentiation between phenomena characterised by facts, such as biological purpose, and phenomena characterised by human evaluative and normative exercises. They attempt to explain purpose in biology from the perspective of human purpose. It should not be controversial to state that biological laws of nature discoverable by science cannot be captured from the perspective of human values, norms and intentions. However, the explanation of human values, norms and intentions involves references to nature which gives the impression of "merging". Thus, instead of providing a universal account of purpose-related phenomena, they should be understood as seeking an *explanation of reference, or relation, to biological purpose from the perspective of human purpose*. Lack of a consequent differentiation between biological purpose and human purpose, leads to problems in the positions of different authors but also to misinterpreting the subject matter of the analysis. It is not the biological purposeful design that is perplexing in philosophy but rather the relation of biology to our purposeful action and decision-making.

5.2.1 Woodfield

Despite the necessity to highlight their differences, it is easy to become confused about the relation of fact and value due to their transcendent relation in phenomena of their alignment. In this section, the approach to disentangling the fact-value problem in the context of purpose will be applied with a specific consideration of the example Woodfield's analysis. Woodfield's mission in "Teleology" (1976) is to make sense of teleological explanations with regards to different types of purpose. Within the framework of this work, the author argues for a differentiation between biological ends and goals however he does not carry it out consequently. For example, in Woodfield's understanding of "goal" it is unclear whether it relates to goals in human case that involve values, as opposed to goals in case of animals. As a result, his analysis of the relationship of ends, goals and goods and the alignment of facts and values (and norms), Woodfield's analysis becomes rather confused. On the one hand, facts and values, ends and goals, biological and human purpose are different types of concepts. On the

other hand, they are ontologically related as is evident in their alignment. To capture this, it is necessary to maintain the necessary delineation between fact- and value-related concepts.

The philosopher identifies two candidate theories that generally characterise ideas for explaining the phenomenon of biological functions (or ends, as Woodfield refers to them) being valuable to organisms. Theory One treats ends as *goals*: "The basic idea of Theory One, then, is that a biological end just is a goal of the system. (…) a natural function is an activity which contributes to a natural end of the system – Theory One modifies it by replacing 'end' by 'goal'. It thereby brings out a conceptual connection between functionality and goal directedness. The deeper formula shows how the teleology of organs is borrowed from the teleology of organisms: hearts have a function only because their owners have goals." He, then explains this based on an example: "Why does the excretion of wastes count as a function of the kidneys? One answer is that the excretion of waste-products helps S to survive and survival is a goal or a G state of S. Another possible answer is that although survival might not be a goal in its own right, the excretion of wastes does contribute to other goals. Indeed it contributes to any goal that S might have, *via contribution it makes to survival*. Being alive is a causally necessary conditions of behaving, and S has to behave if it is to achieve any goal." (1976, S. 125).

Theory One is interesting because it allows to perceive biological functions from the *perspective of the valuer*. It is characterised by the goal set by the subjects or valuing agents. It highlights the epistemological act of attaching values to biological functions, even though Woodfield does not recognise it as he does not highlight the importance of embracing values as opposed to following predispositions. Despite the lack of this *explicit* differentiation, Theory One may allow to capture human purposefulness where biological ends *become* valued, depending on the goal-setting and goal-pursuit of the valuer.

The alternative, Theory Two, understands biological end as *good*, regardless of the epistemological evaluation processes: "S's bodily functions do S good by promoting S's natural ends, where 'ends' means states or processes or activities that are intrinsically good for S" (Woodfield, 1976, S. 130). This is Woodfield's preferred explanation. However, as he observes it raises the challenge of objectivity: "If Theory Two is correct, the objectivity of function-statements is cast into doubt. For it may be doubted whether there are objective natural goods. (…) Two people might agree that X does F and F contributes to survival, but not agree that survival is an end. One of them might hold that survival was a bad thing. Puritans might hold similar views about pleasure." (Woodfield, 1976, S. 131).

Next to the challenge of objectivity which calls for an explanation of what the rational standard behind objective evaluations could be (e.g. fundamental value of life), Theory Two clearly conflates biological and human purposefulness. By suggesting that biological ends are equal to goods, Woodfield suggests that the purpose of biological functions *equals* the purpose relevant to, or as perceived by, valuers individually and subjectively. In contrast to Theory One, Theory Two blurs rather than highlights the epistemological subjective act of valuing which highlights the act of valuing in the context of reference to nature. It is also problematic that Woodfield does not address the question whether values and goals in case of animals and humans can be understood in the same manner.

Woodfield's criticises Theory One for being too subjective. According to the author, it allows that any goal could be a goal. He shows that this openness about goals would lead to *unintelligible* statements about goals of different body parts: "Heroin addicts habitually apply tourniquets to their arms. This makes the veins stand out, and helps them achieve the goal of injecting heroin into the bloodstream. But making the veins stand out in this way is not biologically useful. Indeed, if the formula were true, all goal-contributing behaviour, however maladaptive the goal, would have a function" (Woodfield, 1976, S. 127). Woodfield clearly seeks a theory with an *element* of objectivity as he believes that there must be an objective way to evaluate what is intelligible and what is not with regards to references to nature by valuers.

In effect, discussing *biological purpose alone*, Woodfield judges biological functions *in terms of human purpose, i*.e. what is rational *for an agent*. This is evident as he refers to functions partly in terms of their evolutionary adaptations (as long as it is aligned with our good) *and*, at the same time, referring what *we* should consider as maladaptive. However, this analysis is not entirely aligned with what is adaptive and maladaptive *from the point of view of evolution*. Such normative judgement about biological function is out of place as an account of biological purpose. Biological purpose is accounted for by science and we cannot change how biological functions are designed. Biological functions do precisely what evolution designed them to do and interpretations of whether biological design is rational from our perspective are irrelevant. However, what is highly important and what valuers have control over, is the *manner in which we value* these functions.

What Woodfield truly seeks is an explanation of how we should understand the value of biological functions and predispositions for us and how to explain when it is intelligible to value them. He is not attempting to understand biological purpose alone, but rather the normative understanding of the alignment between biological and human purpose. The fact that Woodfield refers to what *is or is not intelligible* to understand as a value with reference to

facts demonstrates a normative consideration characteristic of human purpose that involves references to biology. Once we consequently apply the logical and epistemologically-relevant differentiation of these two types of purposes, this becomes much clearer. We cannot normatively judge what biological ends are or should be, but we can normatively judge how and when we should embrace them.

Woodfield does identify survival as a fundamental value, as a standard against which objective evaluation can be performed, however he does not explicitly embrace the full potential of his recognition. Woodfield implicitly suggests, with regards to Theory One, that one should understand survival being the ultimate objective good of organisms. Also, it is evident in his further discussions that the philosopher cannot avoid admitting that it makes best sense to understand references to nature in valuing with respect to the ultimate value of life, or survival. The author is led into this direction not only because this is an element of biological purpose from the descriptive perspective. He also recognises, from a normative perspective, that it makes sense for us to value biological functions *because* we value life, as argued in the previous chapter. He explicitly identifies not only the intrinsic but also the instrumental value of life (1976).

Ultimately, Woodfield advocates Theory Two precisely because it helps to understand the alignment between facts and values with relation to the fundamental value of life. This also supports the author's (correct) intuition that there are objective (ontological) characteristics about the relation to biology in valuing that help explain why certain references to nature are rational. In effect, Woodfield still arrives at an explanation why facts and values are aligned and why we embrace biological functions and predispositions. His argument is similar as the argument offered in 4.6 about the normative understanding of embedment in nature.

However, his account runs into problems with regards to the epistemological side of the phenomenon. It is questionable due to the blurring of the epistemological act of valuing by Theory Two which simply assumes what a good is, rather than recognising that good is identified by valuers. As a result, it can be said that Theory Two conflates biological and human purpose and this carries a major problem that is overseen by Woodfield. Such a theory does not sufficiently highlight that there is a difference between presence of a predisposition and agent's act of embracing it as a value likely with reasons. Perhaps in order to mitigate this problem, in arguing for Theory Two, especially against Theory One, Woodfield attempts to remain open about what the ultimate good or value is, as if to leave the choice open to the valuer.

Theory Two provides a valid reference to nature in human valuing that is based on the fact that we value biological predispositions because of the value of life which recognises our embedment in nature from the normative perspective. However, it does not lead to this statement in a valid manner. It is not appropriate to entirely conflate biological ends with values, by stating that biological ends are *good* and to interpret biological functions in terms of *our* goods. Biological functions are present irrespective of values we assign them, although they may have value *for us*. Moreover, this is not only incorrect from the epistemological perspective of valuing and normativity. It is also factually incorrect. Biological functions are not always good for us. Indeed, we frequently object and reject them for moral reasons or due to finding out better ways of pursuing values, even though those that are aligned with biological ends, such as the value of life.

In fact, the strategy of Theory Two is popular among philosophers, as will be discussed in the next sections. Among others, it is similar to Ruse's position as the author frequently discusses goal-directedness of organisms and their "values"[37] as entirely aligned with the purpose of evolution (Ruse, 2017) (further discussed in 5.2.3). However, this is not factually true from the scientific perspective. Ultimate purposes of valuers, particularly when understood as humans, are not necessarily aligned with the purpose of evolution which is the survival and reproduction of species. Ultimate biological end of survival and reproduction of species does not entirely overlap with the fundamental value of life, even though it is *largely* the case. We are not concerned with survival of species but with individual survival and our rational capacities offer us the possibility to find our more efficient and effective ways to pursue survival than evolutionary predispositions. Thus, Woodfield's Theory Two can be contested for the false assumption that biological ends are always aligned with goods of organisms, including humans (although, perhaps, the argument would have been more acceptable if Woodfield differentiated between humans and other organisms).

Despite the fundamental ontological relation between biology and valuing, from the epistemological perspective, biological function is not a value, and a value is not a biological function, *without an involvement of a valuer*. In case of humans, biological and human purpose may often be aligned but are not necessarily so. Maintaining a differentiation between biological ends which are designed according to biological evolutionary design (biological purposefulness) and human valuing which autonomously sets goals (human purposefulness),

[37] Of note is that while Woodfield (Woodfield, 1976) does not often refer to values in case of non-humans but chooses the less controversial term in this context «goal», Ruse does explicitly refer to values in case of animals (Ruse, On Purpose, 2017).

and, in parallel, between goals of animals and goals of humans as values, helps avoid such epistemologically questionable conflation. This helps to account that, in case of humans, the good, goal or value is defined in an autonomous act of valuing by humans, rather than that it is "carried", or *imposed*, by a biological predispositions. That there are goods which are biological ends is, from the epistemological point of view, dependent on the autonomous embracing of biological ends as valued and/or valuable.

There are problems with both theories and not even Woodfield seems entirely satisfied with his analysis and acceptance of Theory Two as the more plausible one. On the one hand, it is true that while Theory One recognizes the dependence of valuing on valuers (assuming that we are speaking of humans as differentiated from animals), if the theory stops there, it falls short of explaining why we value biological functions. Thus, similarly to the dualistic subjective understanding of values and projectionism (at least some versions of it, e.g. Ruse- see chapter 6, 6.2), it does not sufficiently account for the relevance of references to nature. On the other hand, Theory Two involves a false assumption that biological ends are axiomatically values. This neglects the fact that it is humans who actualize valuing, even in case of valuing biological facts, and may chose against such biological predispositions or functions. While Theory One can be understood as an understatement of the ontological relation (although it very well highlights the epistemological relation), Theory Two is a clear overstatement of this relation as it equates values with objects (or refers them entirely to objects) and leaves little space for recognizing the epistemological relation which allows differentiating facts and values. Indeed, the insufficiencies in both theories remind of the insufficiencies in extreme dualistic interpretations of values as either subjective (Theory One) or either objective (Theory Two).

5.2.2 Foot (and Ruse) vs. Fitzpatrick

Other interesting works in the context of applying the approach to the relation of biological facts and values and references to nature are the works of Philippa Foot (2001) and Michael Ruse (2017). Just like in Woodfield's Theory Two, both authors conflate biological ends with *goods*. This is particularly pronounced in the case of Foot who does so intentionally. Although committed to different philosophical frameworks (Foot to Neo-Aristotelianism and Ruse to Kantian projectionism with explicit rejection of Aristotle-derived approaches), their theories both stand out as they conflate biological purpose with human purpose.

Ruse's philosophy demonstrates a strong commitment to the evolution science as he recognises that everything about human beings has been brought about by evolution. Morality, too, is for Ruse a tool of evolution. And yet, Ruse believes that values and norms are projected by agents:

"what the evolutionist claims is that morality exists as a collective illusion, in order to facilitate cooperation amongst humans. It is an adaptation, brought about by natural selection, to help us survive and reproduce (…)" (1984, S. 13). It is a collective illusion because it is arbitrarily dependent on agents to project moral values and norms. Certainly, the combination of commitment to evolution science and projectionism is peculiar. On the one hand, evolution science suggests not only that morality is an evolutionary adaptation but also that we have predispositions to certain values and normative conceptions. On the other hand, Ruse claims that valuers project values and that values are not grounded in anything. Such position raises many unaddressed questions which will be discussed in chapter 6, 6.1 and 6.2, as means of reinterpreting the understanding of values as subjective and objective. Moreover, despite his projectionism, Ruse does not clearly delineate values from biological predispositions. This will be demonstrated below with regards to his concept of goal-directedness in the next section.

Similarly, although more conscious and *intentional* conflation is present in Foot's theory of "natural goodness" or "natural normativity" (2001). Foot perceives values ("goodness") from the perspective of nature ("natural teleology") and vice versa. The author is making references to biological purpose – but only as long as they help her cause. Foot is not entirely and consistently committed to understanding biological purpose as a scientific subject matter which raises important problems. Even though Foot refers to evolutionary biological design in understanding the good of organisms, including human species, with reference to Aristotelian categoricals, she states that "it is imperative that the word 'function' as used here is not confused with its use in evolutionary biology" (2001, S. 31).

Foot states with regards to her references to biology that "features of plants and animals have what one might call an 'autonomous', 'intrinsic', or as I shall say 'natural' goodness and defect that may have nothing to do with the needs or wants of the members of any other species of living thing, and in this they are notably different from what is found elsewhere in other things in the world outside, as for instance rivers or storms" (2001, S. 25). This quote demonstrates how extensive Foot's references to biological purpose are. First of all, specie-relativity is a central element of evolution theory. However, more problematic is to suggest that one should think of the *good* of species in terms of their biological design whereas Foot does not entirely accept the scientific explanations of this design.

The deviation in understanding between human perspective (human purpose) and biological purpose is clear, based on the footnote explaining the authors understanding of "function": "To

say that some feature of a living thing is an adaptation is to place it in the history of a species. To say that it has a function is to say that it has a certain place in the life of the individuals that belong to that species at a certain time" (Foot, 2001, S. 31). The last two sentences reveal Foot's rejection of scientific explanation of the term "function". Foot understands functions not as adaptations "in the history of species" but rather functions in a normative sense. Similarly, she states: "we could say, therefore, that part of what distinguishes an Aristotelian categorical from a mere statistical proposition about some or most or all the members of a kind of living thing is the fact that it relates to the teleology of the species" (Foot, 2001, S. 33). This quote also reveals the commitment to a *normative* interpretation of facts about species, in the light of an attributed understanding, namely their contribution to a "life cycle" (with a meaning of this defined by Foot) instead of a contribution to whatever the *actual* biological end is. In other words, rejecting a consistent reference to biological purpose, science and statistical propositions, leads to substituting these missing elements of purpose with *own* interpretation. Foot suggests understanding of biological functions and end (biological purpose) from the perspective of our good. As a result, her account suffers from the very same problems as Woodfield's Theory Two.

From the perspective of biological purpose, what is "good" for species is what is "good" in terms of their biological purpose[38], as understood based on science. Thus, the "good" is defined entirely by the biological function directed at the ultimate biological end. This is a problematic conscious conflation of evaluative terms with factual terms which is both conceptually and factually wrong. It suggests looking at biological facts *from our perspective* and this provides empirically inaccurate statements. The understanding of the good that Foot offers is not a biological "good", in terms of biological function evaluated from the perspective of ultimate biological end of survival and reproduction of species. It is the understanding of "good" that is *attached* to these biological functions, design, purpose. It is attached by no one else than us, rational agents.

Foot's conflation is evident, for example, here: "let us now ask how all this is relevant to the normative judgements that we make about plants and animals when we say, for instance, that a plant in our garden is diseased, or not growing properly, or that a certain lioness is a neglectful

[38] The term biological "good" can be used here as an exception and only qualified as referring to biological – non-evaluative, non-normative in human terms – purpose. As a principle, it should be avoided in contexts referring to biological purpose understood scientifically. "Good" refers to values and values are not present in biological purpose unless they are *attached* to it.

parent, or a particular rabbit not as reproductive as a rabbit should be" (2001, S. 29-30) The "normative judgements" that *we* make with regards to the biological functions of these organisms will likely not be entirely aligned with the scientific account of these biological functions which are directed at survival and reproduction of species. This echoes the argument made above with regards to Woodfield's Theory Two.

Foot seems to observe this only to a limited extent. Foot indeed asks "But then we must ask what we mean by 'playing a part in the life' of a living thing. What counts as 'its life' in this context? And what is 'playing a part'?" (2001, S. 30). She answers that this has to do with the fact that biological functions, and biological purpose in general, are directed at maintaining "life". While it is true that biological functions and even predispositions, from the evolutionary point of view, *largely* support individual life, it is a scientific fact that the ultimate end of biological purpose, evolution, is survival and reproduction of species, not of individuals. In other words, supporting individual life is only a tool to supporting the survival and reproduction of species. If, indeed, biological purpose had as its final end survival of individuals, it maybe would have been easier, although still not entirely conceptually and factually correct, to perceive biological purpose from the perspective of human purpose. It is easy for us to accept that what furthers biological functions of an individual is good because this is frequently why we embrace biological design. However, it is not factually correct to state that biological design is directed at supporting individual biological functions and individual life.

This is central to Fitzpatrick's criticism of Foot. Fitzpatrick refers to Foot's account as "welfare-based" because it perceives biological purpose as if it was directed at individual life, thus individual good. Fitzpatrick argues plainly that the "welfare-based account of natural teleology, on which it relies, is just false" (2000, S. 366). His arguments against it base on multiple examples of empirical evidence against the idea that evolution is oriented towards the individual life of organisms. It can be applied equally effectively to Woodfield's Theory Two. Fitzpatrick points out that many organisms, such as insects, are equipped with functions that lead them to sacrifice their lives for their kin. By offering such examples, the author believes to demonstrate that evolution is not directed at welfare of organisms understood as supporting the individual life.

For example, discussing the problem of bird clutch sizes, Fitzpatrick argues that a welfare-oriented account (in this case group welfare contributing to individual welfare) ignores the biological-functional evolutionary explanation of bird clutch sizes and leads to arbitrary

explanations of why clutch sizes are as they are. Such explanation can "get lucky" by accident to be aligned with the factually, empirically correct explanation, but "ignoring causal history, one would have no idea which of the above two evolutionary stories[39] underlies the phenomenon in question. How could we possibly be justified in treating something that is entirely incidental – in the way that group benefit or long-term individual benefit is on the second evolutionary story, having non non-accidental connection to the trait in question - as an *end for the sake of which* the trait is manifested? If, from an evolutionary point of view, these effects are nothing but *side-effects* of a trait that is present for altogether different reasons, how could we rightly continue to treat them from a teleological point of view as human ends, *functionally* – and hence *non*-incidentally – served by the trait? Functions must, after all, be distinguished from mere accidents – even where the accidents happen to be beneficial; but it appears that it is precisely the latter that we are led to embrace as if they were human functions, if we look simply to the welfare that is in fact promoted and ignore the history behind the trait" (Fitzpatrick, 2000, S. 198). The lack of empirical accuracy is problematic for such theories as they only refer to empirical evidence as long as it serves their purpose. However, they may, in fact, be factually incorrect whenever they embrace a function not according to its scientific biological explanation (biological purpose) but according to *our own interpretation of it*.

Fitzpatrick links this empirical inaccuracy in Foot's account with its "ahistorical" approach which indeed seems to be advocated by Foot. This "ahistorical" approach is evident in the above quote where Foot rejects of a "function" according to scientific, evolutionary understanding ("To say that some feature of a living thing is an adaptation is to place it in the history of a species. To say that it has a function is to say that it has a certain place in the life of the individuals that belong to that species at a certain time" (Foot, 2001, S. 31)). Fitzpatrick calls it "ahistorical" because it rejects references to evolution, in favour of references to a *normative* understanding of a function. The author shows that such an account of values as equated with biological functions is factually inaccurate. The argument here adds is that it is also epistemologically inappropriate as it does not respect the differences between facts and values in the context of biological and human purpose. In consequence, it undermines the epistemological act of valuing performed by agents.

[39] Fitzpatrick refers here to the two possible evolutionary explanation of varying clutch sizes, one referring to group benefit, the other not.

Thus, when Foot argues that "evaluation of an individual living thing *in its own right, with no reference to our interests or desires*[40], is possible where there is intersection of two types of propositions: on the one hand, Aristotelian categoricals (life-form descriptions relating to the species), and on the other, propositions about particular individuals that are the subject of evaluation" (2001, S. 33) her statement that we detach such evaluation from "our interests or desires" is not correct. Foot does not consistently and consequently refer to biological facts about species which are provided by science and which define the biological purpose. The philosopher departs from the scientific account in that she rejects the understanding of biological purpose in terms of survival and reproduction of species. Instead, she substitutes it with an understanding of this end as "life" of an individual, according to its good. She attaches an understanding more in line with *our* interest or desires.

This is not always evident in Foot's account and it seems to be a very tempting reference to biology: "judgements of goodness and badness can have, it seems, a special 'grammar' when the subject belongs to a living thing, whether plant, animal, or human being" (2001, S. 25). However, Foot does not mean here that the special grammar and language "judgement of goodness or badness" is a scientific one. Quite on the contrary it is an untenable mixture of scientific and normative human-based approach. She is explicit that the method of understanding goodness and badness is the same for plants, animals and human beings. This method, according to Foot, is a one developed from the perspective of our understanding of goodness or badness, rather than from the perspective of biological science that describes biological purpose. Foot suggests that we, human beings, should assign the definition of goodness or badness and we, in our own language interpret the "goodness" of plants and animals. This is why the author considers the ultimate standard against which such definition should made as contribution to life. For us, whatever supports life in biology is good. And yet, while many elements of biology support individual life, it is not accurate to state that it is the function of biology to support individual life. The truth remains that such an interpretation that is not in line with empirical evidence is attached or, indeed, *projected*[41]. Foot assigns such

[40] Emphasis added.

[41] Note that this is an entirely different discussion from discussion about value of nature or value of animals. It only concerns formulation of values and understanding of values as subjective and objective. Just because we may "project" values, does not mean that plants, animals or rest of nature are not valuable.

subjective human interpretations where they are not present, i.e. in the realm of plants and animals which cannot be understood as valuing agents *in the same manner* as humans are[42].

Ironically, as outlined in chapter 2, 2.2.2, Foot admits that she has been trying to detach the explanation of values from Humean subjectivist account according to which values are "pro-attitudes" that express "attitudes, practical decisions, desires". Foot does not deny that these Humean elements are relevant, she only argues that they are not exclusive explanatory elements of valuing and goodness. She aims to points out, like many other authors, that in understanding of our goods there are references to objective, factual elements. However, in doing so, the author does not consistently pay respect to this ontological basis, i.e. facts that are relevant in such references.

Despite her commitment to reject this dualistic "Humean" base (Foot, 2001), she does not entirely escape it, as she would like. One could say that by attaching a human-centric explanation of biological ends as goods, she simply enlarges the group of "pro-attitude" capable "agents" to all-living organisms but applying human understanding of those "attitudes". She tries to include the objective, factual elements into the subjective account of values. As a result, she attaches human pro-attitudes to other organisms. The author ascribes to *our* understanding of the *good* to organisms that are entirely biological and cannot be said to value, at least in the way that humans do.

It is correct to draw the similarity between humans and other organisms in the fact that the objective, factual elements are relevant for the functioning of both. However, it is also not entirely correct to disregard the difference that humans embrace biological functions and predispositions as values, while plants and many animals do not. This is also why Fitzpatrick appeals to a solution that does not provides appropriate account of the autonomous and rational evaluative and normative exercises in humans that lead us to "transcend our proper biological functioning, and do so in a systematic way that ultimately makes our lives our own in an important sense" (2000, S. 368).

Of course, Foot addresses the familiar objections, such as those directed at natural lawyers by Hart. Foot accounts for difference in human action and valuing as opposed to other beings and explicitly states that "the teleological story goes beyond a reference to survival itself" (2001,

[42] Again, a clear delineation between animals and humans, especially between primates and humans, is neither possible nor accurate. More on this in Ruse .

S. 43). The author explains the diversity of human goods and outlines the specificity of human species, as opposed to other organisms. However, this does not alleviate the fundamental problems and the essence of the problem with her account is similar as in case of other theories that involve reference to nature. While it attempts to outline a theory that involves references to nature, it provides a questionable account of the relation of fact and value, biological and human purpose because of the lack of clear emphasis on differences between value- and fact-related phenomena. Her account is correct in recognising the alignment of biological and human purpose which is linked to the fundamental value of life (understood as demonstrating our embedment in nature). However, it fails to capture the differentiation between the account of biological purpose and human purpose that bases on consequence in recognising the differences in logical nature and epistemological functions and characteristics of facts and values.

Nevertheless, it should be admitted that the criticism of Foot concerns only the capacity of the author's account to capture particularly the epistemological perspective of the relation between facts and values. Her understanding of this relation is not at all diverging from what is promoted in this work. Consider Foot's account of this: "What, then, is to be said about the relation between 'fact' and 'value'? The thesis of this chapter is that the grounding of a moral argument is ultimately in facts about human life—facts of the kind that Anscombe mentioned in talking about the good that hangs on the institution of promising, and of the kind that I spoke of in saying why it was a part of rationality for human beings to take special care each for his or her own future. In my view, therefore, a moral evaluation does not stand over against the statement of a matter of fact, but rather has to do with facts about a particular subject matter, as do evaluations of such things as sight and hearing in animals, and other aspects of their behaviour. Nobody would, I think, take it as other than a plain matter of fact that there is something wrong with the hearing of a gull that cannot distinguish the cry of its own chick, as with the sight of an owl that cannot see in the dark. Similarly, it is obvious that there are objective, factual evaluations of such things as human sight, hearing, memory, and concentration, based on the life form of our own species" (2001, S. 24). In this account, Foot suggests that facts about human nature are essential elements of understanding normative questions, due to certain ontological characteristics about humans, understood explored in sciences such as biology. These ontological characteristics in this work are referred to as embedment in nature. In fact, Foot draws this ontological, biological relevance by comparison to other organisms embedded in nature.

Foot then asks “Why, then, does it seem so monstrous a suggestion that the evaluation of the human will should be determined by facts about the nature of human beings and the life of our own species? Undoubtedly the resistance has something to do with the thought that the goodness of good action has a special relation to choice. But as I have tried to show, this special relation is not what non-cognitivists think it is, but rather lies in the fact that moral action is rational action, and in the fact that human beings are creatures with the power to recognize reasons for action and to act on them. This in no way precludes recognition of the part played by ‘sentiments’ such as (negatively) shame and revulsion or (positively) sympathy, self-respect, and pride in motivating human virtue” (2001, S. 24). In this continuation of the quote, Foot highlights that the ontological characteristics present in biological facts are relevant to humans despite the fact that *humans choose their action and values autonomously*. This quote provides evidence that the author does consider that “human beings are creatures with the power to recognize reasons for action and to act on them”, regardless of the extent to which reasons for action are linked with biology. Thus, it seems that undermining the epistemological exercise of valuing in her account is an unintentional effect of her arguments.

5.2.3 Ruse

One of the previous sections (5.1.2.1) has outlined the differentiation between biological and human purpose with regards to goal-directed behaviour. It was argued that while both animals and humans behave in a goal-directed manner, the differences between their goal-directed behaviour are significant. Among others, they differ in terms of what characterises their intentionality and respective goal-directed decisions. Humans have much higher awareness and ownership of their decisions. As Anscombe (1963) argued, based on this deep understanding of intentions, humans can give respectively complex explanations of their actions (not because of the capacity to express them linguistically, but because of the capacity to be aware and comprehend them, thus, also communicate them in any manner). This position is contested by Ruse (2017) and the present section will discuss Ruse’s view in this context in order to analyse his conflation of the two types of purpose, characterised by facts and values. Ruse understands animal goal-directedness *as a manifestation of the ability and capacity to value*, thereby entirely blurring the delineation between facts and values, biological functions and predispositions and reason-based autonomous valuing.

Ruse (2017) discusses Anscombe’s (1963) account of intentionality with regards to differences between humans and animals. Ruse criticises the very idea discussed in 5.1.2.1 that only humans can intentionally set goals, or final causes as he refers to them, because only humans

can provide a comprehensive answer about "why" they decide (act or value) as they do. In contrast, the "why" in case of animals refers to mere natural regularities, such as biological predispositions, pertaining to the nature of their species. Ruse counters this suggestion with the observation that in case of animals, values are not only mere regularities but rather show underlying *needs* which can serve as explanations for *why* these "values" (as he refers to them) are values Ruse states: "Consider lions. Apparently, the females do the hunting. The males wait for the catch and, using their superior strength to help themselves, move in. A female lion goes (intentionally) to the top of the gully, hides in a thicket, waiting to jump out when the buck gets close. A second lion goes (intentionally) down the gully and waits, and then when the frightened buck comes racing down, grabs it and kills it. Intentions, reasons or "reasons," if you like—Why did the lion hide in the thicket? To scare the buck—but overall about as causal as you could possibly imagine. It is not a question of causes or reasons but causes and reasons. Efficient and final causes. "The origin of action—its efficient not its final cause—is choice, and that of choice is desire and reasoning with a view to an end. The lions' behavior was causally adaptive—they did what they did in order to survive and reproduce (…)" (2017, S. 187 - 188).

With this example, Ruse attempts to explain *why* animals perform certain actions and which values they pursue with reference to final causes which, nonetheless, are characterised entirely by the nature of their species. Thus, he misses the point made by Anscombe. What Anscombe points towards is that the "why" in case of humans leads to entirely different *type of explanation.* In case of animals, this explanation refers to scientific facts and regularities, whereas in case of humans, instead of facts and regularities, it concerns references to subjective states, evaluative and normative exercises, reasoning, etc. Based on the study of their behaviour, animal actions can be easily foreseen and attributed to biological needs and predispositions. It is undisputed that, in a more or less complex manner, many animals simply follow their biological functions and predisposition without reflection. Even though some argue (e.g. Rolston (1994)) that they act in an intentional manner, their intentions and goals are dictated by biological predispositions.

Elsewhere, Ruse argues that we oversee that animals have final cause, in terms of values, just as humans because they cannot communicate it. For example, he asks rhetorically (and sardonically, in order to make his point): "if warthogs feel that they are so very important, why don't they speak up and say so?" (2017, S. 106). Again, the very same argument applies as outlined in 5.1.2.1. It is not the fact that warthogs do not *speak* in human languages that draws a delineation from humans, but rather the fact that they would not likely have the capacity to

express their values, intentions, motivation, etc., *in any type of language*. This is likely because they do not comprehend values, intentions, motivations, etc. as humans do, with equal grade of awareness and ownership. They do not express these goals, because their goals are not characterised by anything beyond facts studied empirically by scientists.

This is yet another example of the differentiation between biological and human purpose which refers to the fact that both types of purpose are characterised by phenomena referring to different types of concepts. One involves a primarily factual account, the other involves evaluation, normativity, reasoning, next to references to facts. Thus, even though as Ruse observes we can indicate a purpose or final causes in case of goal-directed animal behaviour, it is a *different type* of purpose than purpose in case of goal-directedness in humans.

It is evident that this difference between humans and animals is ignored by Ruse. The author continues the quote relating to goal-directedness of lions by equating lions' behaviour and "behaviour" of a plant, Venus flytrap "The lions' behavior was causally adaptive – they did what they did in order to survive and reproduce – as does the totally unconscious Venus flytrap when it snaps shut on some unfortunate insect that has wandered within its orb. The fact that the lion scenario is all about values—the lions want to catch the buck, because for them this is a good thing—is far from being a problem and taking us from a causal analysis, precisely what we expect and demand. After all, the plant wants to trap the fly—from the plant's viewpoint, it is a very good thing" (2017, S. 187 - 188).

His quote is problematic not because the Venus flytrap is unconscious. The problem is that being unconscious (and likely not even having the capacity to have intentions) Ruse assigns *desires* to it. Venus flytrap may be a special case of a plant, much more active and dynamic than other plants. However, is it appropriate to suggest that it literally *wants* to trap flies? Does it also have beliefs about how to trap the fly? This is the very same problem that affects Woodfield's (1976) model of goal-directedness: do rats really have desires and beliefs? Or do we only interpret their actions *as if* they had them? It is difficult to see why Ruse's characterisation would not be applied also to other plants than Venus flytrap. And if it would be applied to other plants, why not also to bacteria, fungi and viruses? How far can we go in attributing desires and beliefs, even in a metaphorical way, to organisms?

As noted previously, there are models of goal-directedness which are so broad that they apply to all living organisms. Irrespective of the inclusiveness of the definition of goal-directedness, the differences in the type of goal-directedness between humans and other animals cannot be neglected. This is true, even if there is a continuous line of development of mental capacities of different species that there is no absolute break between the capacity to value, reason and

evaluate as opposed to simply unreflectively and unconsciously following biological functions and predispositions.

However, it is obvious that Ruse does not differentiate goal-directedness of humans from goal-directedness of other organisms. This implies that the author does not respect the logical and epistemologically-relevant delineation between facts and values which highlights the specifications of the act of valuing by an agent. Ruse explicitly asserts that *lions value*: following biological predispositions and functions in case of lions is "all about values" (2017). For this reason, analysing lions' behaviour which is likely entirely dependent on biological functions and predispositions (as is in case of Venus flytrap), Ruse believes he is explaining values. This is particularly bizarre in case of Ruse, given that the philosopher is an advocate of projectionism which is a position that clearly highlights valuing as an epistemological process dependent on a valuing agent. It is highly unlikely that any proponent of projectionism would consider plants such as Venus flytrap or even animals such as lions *valuing agents*. This is a point that will be tackled in the next chapter (chapter 6, 6.1 and 6.2).

One could speculate why Ruse is led to this position. Perhaps it is the impression created by the descriptive account that shows our embedment in nature. Ruse is committed to scientific findings according to which evolution has defined our biological functions and predispositions in a similar way as it has defined biological functions and predispositions in other species. However, this certainly does not justify equating biological traits, functions and predispositions and values. All organisms may have *needs* that are manifested in evolutionary functions and predispositions. However, such biological needs are not necessarily values in the sense of a value understood in case of humans. Similarly, humans may even be predisposed to certain evaluative conceptions, but these are not axiomatically values. They *become* valued, embraced or rejected, following agent's acts of formulation and pursuing values.

This conflation is evident in Ruse's other works. In another example, Ruse (1973) attempted to understand goal-directedness in case of species as a whole, *from the perspective of evolution*, rather than from the perspective of individual organisms. This shows that the author not only does not differentiate between different kinds of goal-directed behaviour in case of different organisms, but also does not disentangle it from biological purpose in case of evolutionary design. This is evident in the discussion of goal-directedness with regards to the popular example of bird clutch sizes, where Ruse's attempts to show that evolution is *designed along values* because it is "tuned" with their needs. The author claims that the number of bird clutch sizes is not only designed by evolution to fulfil the evolutionary function of survival and reproduction of species, but also to fulfil the needs of organisms.

A functional explanation of clutch sizes suggests that birds lay as many eggs as possible according to their clutch size in order to produce off-spring and maintain the species. However, Ruse suggests that if this was the only explanation, species would strive to produce more offspring than set by the clutch size in order to maximize chances of continuing species. To account for the reason why birds lay exactly the amount of eggs that correspond to their clutch sizes Ruse offers an analogy with humans. Humans produce a number of off-spring that seems most appropriate for them, in order to provide them the best possible up-bringing and ensure high quality of life. Some people seem fit to have three children, others one or none at all. Our choice in respect to having children is guided by our expectations, plans for life that revolve around our needs. Similarly, Ruse suggests that "(…) clutch-size is in some sense the result of the optimum number that the parents will be able to raise (in the future), that is, the 'purpose ' of a particular clutch-size is to ensure the maximum number of successful offspring" (1973, S. 434).

According to Ruse, this observation shows that beyond a functional explanation to maximize numbers of organisms within species, there are needs or "*values*" that birds pursue by having exactly the number of offspring that enables them to pursue their needs. Ruse believes that evolution is, thus, "tuned" with needs of organisms. This suggests that organisms are not mere "tools" of evolution, but that evolution also accounts for their needs and "values". However, this is not necessarily even factually true. Considering Ruse's acknowledgement of the evidence fact that evolution predisposes us to survive and reproduce (and sustain species), needs and values of organisms have to be designed by evolution in a way that ensures their optimum survival, as species (not organisms). This means that there would be no purpose for evolution to design birds in a way that they would exceed their capacity to produce and nurture healthy offspring. Thus, the idea that we are predisposed to an optimum number of offspring does not mean, from the perspective of the evolutionary design, that biology designs organisms to pursue *their individual goods*. In fact, all evidence that even Ruse himself offers, suggests that organisms apparently are only *a tool for evolution* to perpetuate species.

Indeed, Ruse's likening of biological traits, functions, predispositions and needs with values is very reminiscent of Philippa Foot's (2001) explicit ascription of evaluative understanding of good to the biological design. Similarly to Foot, also Ruse advocates the that biological design is *good* for organisms. Thus, similar criticism applies also in the case of Ruse. Except for being factually incorrect to claim that individual good entirely overlaps with the evolutionary purpose, the more important problem is the epistemologically inappropriate lack of differentiation between fact- and value-related phenomena. This, in turn, undermines the

specificity of the act of valuing in the case of humans which may involve either embracing or rejection biological design. This is true despite a certain level of overlap between biological and human purpose, and ontological dependence of our functioning on the biological design which motivates and warrants references to nature.

5.3 Designer in human purpose and "designer" in biological purpose

Given that most explanations of purpose understand human purposefulness as its paradigmatic case and are characterised by involvement of evaluative and normative concepts, they are not fit to explaining biological purpose. Applied to biological purpose, many concepts have to be qualified and reinterpreted, often in a metaphorical sense. For example, Aristotle's standard model of purpose could be applied to biological purpose in the following way: biological functions (evolutionary adaptations) come about through evolution (efficient cause) for the purpose of increasing survival and reproduction chances of species (final cause). The problem in fully embracing this view is that it is traditionally linked to the implication that there is a designer. Could one assert that evolution or natural selection is the designer? Most philosophers answer "no" because evolution is not a designer *in the human sense* of a designer. Considering this, it is also possible to answer "yes" – if one differentiates that there are two types of a designer.

The concept of designer is linked with the dualistic understanding of values as objective and it is affected by similar problems related to dualism as those addressed in chapter 2, 2.2.3.4. This section will introduce and briefly discuss the problem from the perspective of purpose. It is relevant in the context of the topic because it its yet another concept that requires a sound understanding of the relation (and the differentiation) between fact and values and related phenomena. Moreover, as this concept has a direct relevance to understanding values as subjective and objective, certain relevant discussions will be continued in chapter 6.

Sciences studying the evolutionary framework clearly and reliably help us discover the biological *design* with help of theory and evidence, as presented in chapter 4, 4.2. From the scientific point of view, it is beyond doubt that evolution involves a design which defines biology and, thus, other sciences about living organisms. The evolutionary design has a clear identifiable purposeful pattern directed at the ultimate purpose, the biological end of survival and reproduction of species. Biological design is a design, although it is different from human-made designs. For example, it *does not come about* as does design in cases of human phenomena as it does not involve a rational, human-like agent. The idea of evolution as designer is not taken seriously precisely because *designer* is understood as a human-like agent

that is capable of valuing and reasoning. Evolution is no such designer. Alternatively, understanding biological purpose metaphorically, based on the paradigm case of purpose being human purpose of human decision-making, is a popular idea. While such accounts do not truly recognise biological purpose as an instance of purpose, such approach comes close to differentiating between two types of purpose.

The concept of a designer is closely linked with the understanding of values as objective, especially in the dualistic sense. According to the dualistic view, there must be a designer who designs the values and norms relevant and applicable for such intelligent valuers as humans. It seems to be often assumed that a god-like designer, a source beyond nature, is the only type of designer capable of designing such values. Moreover, the fact that we seem to *recognize* values, gives us the impression that they must be *predesigned*, as even Ruse notes (2017). Thus, in case of references to a designer of values beyond what is observable, the tendency is to refer to a god-like designer as the ultimate and omnipotent designer. Authors (e.g. Putnam (2002)) often bypass or reject this view as implausible without any deep engagement with it. Understanding such assumptions as necessarily associated with the objective view of values, authors also tend to reject the objective view of values. This is also the case with Michael Ruse, as will be discussed in the next chapter.

Woodfield claims that the idea that biological purposefulness is not *truly* teleological is associated with Kant's projectionism. In that view, purpose and values can only be set by a rational and an autonomous being. Since evolution has neither the capacity to value, nor a mind to design values, nature cannot be purposeful. Woodfield notes that Kant's problem applies to biological purpose, given that, according to the author, Kant did not want to "make his theory dependent on a *commitment* that organisms are artefacts" (1976, S. 31). This exposes the human-based understanding of purpose. According to the popular interpretation, only those statements are truly purposeful that have been *literally* designed as humans design their goals. For this reason, projectionism suggests that the teleological understanding of nature has only heuristic application, but does not characterise the ontology of biology (Toepfer, 2011). Statements of biological purpose are not statements of real purpose or function[43] but statements of "apparently intended function" (Woodfield, 1976, S. 31). They are analogous to the functions and purposes of human-designed artefacts, but their functions and purposes are *metaphorical*.

[43] For the present purposes, Woodfield`s use of "function" can be understood interchangeably with "purpose" in the biological context.

In line with this that Fitzpatrick does not recognize that natural selection is a real design. Fitzpatrick says that natural selection is not a design or designer because does not take place "for the sake of something" (2000). It has no intention or values to be for the sake of some value (unless humans confer them). Fitzpatrick first asks, "what is it that organisms have, as it were, been "designed" by natural selection ultimately to do, this being their *work* in the functional sense?" (2000, S. 45) He then immediately clarifies that "(…) the use of the design metaphor here is innocuous, and is not intended to be doing any philosophical work. Its use is justified as a simple convenience on the grounds that the natural selection history behind a given organism-type shares with the process of design and creation the important causal role discussed earlier, and therefore plausibly shares the role of shaping the teleological structure of the systems in question" Fitzpatrick admits that natural selection manifests characteristics of a design, however he goes on to affirm that "natural selection is not itself a teleological process, like the process of design and creation (…)" (2000, S. 45).

This understanding of human purpose as the *real* type of purpose and biological purpose as metaphorical may reveal certain anthropocentrism but does not necessarily preclude explaining the phenomenon valuer's reference to biology present in human purpose. It highlights human purpose which requires references to a human valuer that is capable of formulating values, embracing or rejecting biological design. From this perspective, Kant's concept of a designer and projectionism makes perfect sense because it respects the logical specificities of the concept of value.

However, it is odd to state, as often is based on projectionism, that biological design is not a design because it is not designed by human valuers. Biological design exists independently of human intentions. This is why Woodfield notes that Kant's projectionism and heuristic understanding of purpose has only a limited application in case of nature, as detached from valuers "Actually, Kant's view that natural function-statements are metaphorical because they borrow their sense from the artefact-model may not be correct. Although *some* biological function-statements may seem metaphorical, some seem to be literally false (e.g. "Noses exist in order to support spectacles"), and some are literally true. We often think that we can identify a function of an organ despite the fact that we do not know whether the organ was intended to do that by a designer" (1976, S. 32). As Woodfield notes elsewhere, it is an objective fact, that some organs or artefacts created also by animals, have functions or purposes. Again, my heart as a function (biological purpose) which is subjectively valuable for me, but it has this function irrespective of what value I attach to it. In fact, this point reveals the clash between speaking in terms of epistemological and ontological phenomena. Conferring values is an

epistemological phenomenon, while nature and natural world is an ontological phenomenon. For this reason, statements about the former are not really applicable in terms of the latter.

The advantage of adopting a differentiation between human and biological purpose allows to differentiate two types of purpose without denying that, epistemologically, valuing is necessarily dependent on the valuer, as Kant's projectionism emphasises. Agents autonomously refer to biological design. At the same time, biological purpose and design exist (ontologically) irrespectively of purpose and design formulated (epistemologically) by humans. This differentiation should allow to grant that there can be biological purpose, design and designer, which differs from human purpose, design and designer. Granting this does not detach the epistemological process of valuing from valuers.

It was granted that projectionism makes an important epistemological point. However, it should also be pointed out that it does not provide a sufficient explanation. From the epistemological point of view, as projectionism advocates, values are designed by valuers. However, also from the epistemological point of view, biological facts are "designed" by the laws of nature. This follows the logical/epistemological characteristics of facts, as noted in 3.3.1 based on Searle (1964). Epistemologically, biological purpose, design, laws of nature, etc. *are not* designed by valuers. It is quite clear, thus, that this view falls short of explaining some phenomena. Projectionism alone also does not sufficiently explain why we value as we value, beyond the reference to the epistemological process of valuing. In that sense, it explains valuing only in terms of the *type of a process* it is: we value as we value because we have the capacity to formulate, confer, embrace values. However, projectionism does not explain why we value as we value with reference to the *content of values*. Thus, it does not explain the ontologically-relevant phenomenon concerning why we value biological functions and why we often actualize biological predispositions.

Epistemologically – from the perspective of the types of concepts facts and values are and how they are produced or formulated – there are two types of purpose, two types of designs and two types of designers. This makes sense considering that the epistemological perspective highlights logical differences between types of statements and phenomena derived from facts and types of statements and phenomena derived from values. Biological facts and values are logically different types of concepts, as was argued in chapter 3, 3.3.1. Epistemologically, human agents design their values and have a full ownership of this process. However, they do not design laws of nature. This remains valid whichever type of purpose one considers as the paradigmatic case. As far as this question is concerned, there is nothing against referring to biological "designer" in parentheses, as long as it is not denied as a type of purpose.

Evolution and biology have not been perceived as a plausible designer; however, especially nowadays, neither is a god-like designer. There is little need to argue why the idea that a god-like being is the designer is not taken seriously, even without considering Putnam's arguments against "rampant Platonism" (2002). A god-like designer is not an appropriate solution for a designer of biology, because we cannot test her or his existence. Also human purposefulness does not have to refer to God; it is the valuing agent who subjectively designs or embraces values as a part of the epistemological process of valuing and reasoning. God is a matter of faith and this is an issue beyond the scope of inquiry in this work. Some authors, such as Ruse, reject the idea that values can be objective because, in their view, such idea would entail a reference to a god-like designer. However, this is not the only possible understanding of values as objective. Given this reinterpretation of the concept of designer in a dual way and the rejection of the need to refer to a god-like designer, in the next and final step it is necessary to address the resulting, non-dualistic understanding of values as objective and subjective.

5.4 Conclusion

Discussion of purpose offers the possibility to apply the approach to understanding the fact-value relation in contexts involving references to nature from epistemological and ontological perspectives. This enables to demonstrate the logical and epistemologically-relevant differentiation between facts and values, according to the epistemological perspective, while allowing to make sense of their relation and alignment, according to ontological perspective. Phenomena which are accounted for by facts, such as biological design (referred to as biological purpose) and phenomena that involve evaluative and normative considerations such as human goal-setting and goal-pursuit are both purposeful. Moreover, the alignment of facts and values in agents' references to nature resulting from their ontological embedment in nature, can be captured from the perspective of purpose. We embrace biological functions and predispositions because of the fact that the fundamental value of life overlaps with the biological end, or the ultimate purpose of evolution, which is why biological design is largely – although not always – *good for us*. Due to this ontological phenomenon of the overlap and our embedment in nature, biological design is relevant to our action and valuing.

This phenomenon may give an impression of merging of facts and values, however in the context of purpose it is demonstrated how the approach proposed here aims to capture it with a higher precision. It allows to state that that purposeful phenomena characterised by facts and values them are logically and epistemologically different. Phenomena captured by facts, such

as purpose in biology, are description produced based on empirical and scientific process. Phenomena where agents attach values, such as purpose in human action and decision-making, are produced by the autonomous evaluative and normative exercises of an agent. At the same time, biological and human purpose are ontologically related, as evident in our references to nature, due to the biological design that embeds us in nature.

The application of the approach in this context has been made with reference to various authors. The main argument in the context of their theories that involve references to nature was to maintain a consistent and coherent differentiation between fact and value and related phenomena, such as different types of purpose. This differentiation does not deny that facts and values are related but, on the contrary, helps to capture this relation better and clearer while respecting the differences between facts and values and the fact that values are embraced by an agent.

The discussions have important consequences for understanding values as objective and subjective. This is partly evident in the concept of a designer which is often associated with the concept of purpose. There are two, different in logical and epistemological terms, purposeful phenomena where the concept of a designer applies in a different manner. Despite the recognition that human is (the epistemological) designer of values, there is an important relation between values and biology pertaining to our embedment in nature and warranting references to nature. This dual aspect of valuing urges a return to discussions about understanding of values as subjective and objective, as exposed in chapter 2.

6 The nature of values considering their relation to facts

Chapter 2 has exposed certain issues about the concept of value which are relevant to understanding its relation to facts. Although it is not possible to address the extensive concept of value in more depth, the understanding of values as subjective and objective is closely linked to the problem of the fact-value relation. With a hopefully clearer idea of this relation, we shall now attend to these issues. In order to do so, Ruse's (2017) peculiar understanding of values and purpose, given his extensive references to biology, will be used as a basis for discussion.

The traditional understanding of values as subjective and objective contains dualistic assumptions as was discussed in chapter 2. Given that subject-object, fact-value, and mind-body dualisms are contested, it is necessary to justify a respective reinterpretation of values as subjective and objective.

The ontological relation of facts and values, and more precisely its normative understanding, explains why valuers *refer to objects*, i.e. biological facts. We refer to objects in valuing, because we are embedded in nature and it was showed how and why valuing these objects (biological functions and predispositions) is often valuable. Our embedment in nature, perceived from the normative perspective, means that due to the fact that life has a fundamental value to us, it is rational for us to respect the biological design which explains why we value certain biological functions. This warrants an objective reference to nature. It is objective in the sense that it is valid for all valuers, as we are members of the same species to which embedment in nature applies in the same manner. Even when we oppose certain functions or predispositions, we act within the overall biological framework as we must respect the value of our life in order to act autonomously.

At the same time, highlighting the logical and epistemological differences between facts and values ensures that the important delineation between these types of concepts is maintained. As a result, it is safeguarded that formulating values, as opposed to formulating facts, is an act of an agent capable of not only valuing but also reasoning, thereby addressing also the is-ought objections. This is an emphasis on the epistemological valuer-dependency which is a feature highlighted by the subjective view of values. Indeed, both subjective and objective perspectives emphasise important phenomena surrounding valuing that are conveyed separately by the dualistic understanding of values as subjective and objective. Valuers refer to objects because it is frequently rational. However, it is valuers who make this reference and embrace such fact-related values because they have subjective states and/or are convinced of their valuability. Elements of both subjective and objective values are important and can be reconciled in a non-dualistic manner.

It was mentioned in chapter 2 (2.2.3.4.1) and in chapter 5 (5.3) that the reference to a source beyond nature, such as a god-like designer, has been perceived as the only possibility for a theory of objective values in the dualistic framework. The understanding has been that only a god-like designer can be capable of formulating values which are relevant for us. Nevertheless, such involvement of a god-like designer who gives transcendent moral values and norms is neither tenable nor plausible.

With the assumption that objective values involve a god-like designer, a source beyond nature, philosophers assume two strategies: to accept the understanding of the concept of objective values involving a god-like designer, and either to accept or reject that values can be objective, or to reject this interpretation of objective values altogether. The former is the strategy of Ruse (2017) which explains why the philosopher felt he had to put a heuristic twist on this

explanation and why he rejected the idea that values are objective despite his reference to foundations in biology (see further in 6.1 and 6.2). The latter strategy has been assumed by Putnam (2002) who criticised a similar interpretation of objective values (dubbing it "rampant Platonism") and proposed a different understanding what objective values are (see 2.2.3.4.2)

Based on the analysis of points made by Putnam against the dualistic understanding of objective values, chapter 2 has already outlined a plausible explanation of objective values. It is possible to refer to biological facts as objects without needing to involve mysterious sources beyond nature and without undermining human autonomy. Indeed, this explanation can be showed as suitable in the light of the proposed approach to understanding the relation between facts and values outlined here. Statements such as "foundations of values" should not be understood dualistically but as referring to the idea of our embedment in nature. The concept must be disentangled from the idea that values are "cast in concrete" (Putnam, 2002) by some external source and imposed on valuers to the extent that the *process of valuing and its content* is not dependant on their autonomous exercise.

An interesting manner to present this discussion is the exposition of inconsistencies in Ruse's (2017) theory which is based on the traditional dualistic understanding of values in combination with empirical evidence. Given the philosopher's commitment to evidence from studies of evolution, Ruse would be expected to believe in a grounding of values in nature, at least in a certain way. Yet, he explicitly states that values have no foundations, as will be shown in section 6.1. Secondly, section 6.2 will also discuss how implausible Ruse's projectionism is in the context of empirical evidence and his rejection of foundations of values. The incoherencies are partly due to the fact that the philosopher works with a dualistic understanding of values. Subsequently, section 6.3 will conclude on the appropriate understanding of values as subjective and objective, given their relation to facts as seen from the ontological and the epistemological perspectives.

6.1 Ruse's denial of foundation of values

The first striking point about Ruse's account of values within the empirical approach is his denial that there are foundations of values and that values are objective. The idea of values being *founded* may have different meanings depending on how one defines this idea. However, the concept of foundation of values can be associated with the concept of objective values: values refer to objects relevant for valuing, which means that these objects are the foundations of values. Of course, in the context of empirical research about values, one should not talk

about values in the normative but in the descriptive sense, as value predispositions. However, Ruse does not explicitly recognise this.

Ruse clearly argues with reference to evolution theory that values (more precisely, value predispositions, or actual values that happen to be aligned with value predispositions) are grounded – and there is nothing against saying that they are *founded* – in biology due to our evolutionary background. Considering the empirical evidence he puts forward, values are universal because they are "put in place by natural selection" (Ruse, 2017, S. 220) for all human beings as members of the same species. As an evolutionist, Ruse explicitly believes that everything species are, what they need and how they value is the result of evolution through natural selection. As Ruse states, even mental capacities are a product of evolution, even though they allow us to act against biological predispositions and have values only indirectly linked to biological functions and survival and reproduction (2017).

Ruse strongly believes in a foundation of morality and values in biology. The following quotes leave no doubt about it: "everything human, including the mind and culture, has a material base and originated during the evolution of the human genetic constitution and its interaction with the environment" (Ruse & Wilson, 1986, S. 173); "the [biological] constraints on this development are the sources of our strongest feelings of right and wrong, and they are powerful enough to serve as a foundation for ethical code" (Ruse & Wilson, 1986, S. 174) or "beliefs in extrasomatic moral truths and in an absolute is/ought barrier are wrong. Moral premises relate only to our physical nature and are the result of an idiosyncratic genetic history-a history which is nevertheless powerful and general enough within the human species to form working codes". (Ruse & Wilson, 1986, S. 173); finally, "In short, there appears to be no escape from the biological foundation of mind" (Ruse & Wilson, 1986, S. 180). Some quotes are indeed quite strong, but it is not necessary to wonder whether Ruse and Wilson suggest deriving moral truths from genetics. Based on the entire context of their work, the authors simply assert that there are objective facts about how we *tend to* value and formulate moral norms.

The universality of values is an important feature that reveals their grounding in biology. Ruse recognizes that the ultimate goal for humans, as it is for other beings, is survival and reproduction: "let us agree (with qualifications to come) that ultimately we are thinking and reasoning about things that will help us successfully to survive and reproduce. But what as animals—particularly what as humans—do we need or do to survive and reproduce?" (Ruse, 2017, S. 211). Ruse agrees that all organisms pursue the goal of survival and reproduction as the ultimate goals to which other goals are subordinated along evolutionary explanations. These

goals are universal for organisms, especially within same species, due to the biological design. Finally, Ruse also explicitly states that there are universal moral truths: ""Rape is wrong" means rape is wrong – it is morally prohibited – even if the whole world thinks it is okay. (…) The meaning of moral statements includes objectivity. "Rape is wrong" means it is objectively wrong to rape" (Ruse, 2017, S. 223 - 224) and "a Darwinian evolutionist can and does have moral purposes. Generally, these will be the same purposes as everyone else – "don't sexually abuse small children" – but although we don't have extreme relativity, they will be geared to our underlying biology." (Ruse, 2017, S. 224).

Despite these statements, Ruse claims that there are *no foundations* of morality, and thus no foundations of values: "(…) I argue that once you have given a Darwinian explanation of moral beliefs, you see that there is no foundation. Morality is a set of subjective beliefs, not a reflection of objective, human-independent reality" (2017, S. 219). Indeed, he repeats the statement about lack of foundations of morality throughout his "On Purpose" (2017) book as well as in many articles (e.g. Ruse & Wilson (1986)). This confusing position inclines the reader to think that Ruse must have a special understanding of the concept of foundations of values and objective values. Certainly, it must be different from understanding "foundation of values" as referring to our evolutionarily embedment in nature.

One could object that since Ruse is concerned with the descriptive understanding of morality, values and norms, his evidence has no necessary *implications* on the normative understanding of these concepts. While not explicit about it, Ruse may not consider value predispositions, of which he actually speaks when referring to "values", as "genuine" values. This may be the reason why Ruse confusedly states that despite the foundation of morality or values (meaning value predispositions, descriptively) in nature, morality (meaning "genuine" values, resulting from the normative exercise) has no foundation. Perhaps in both cases he simply refers to a different understanding of morality: descriptive and normative. The descriptive account of values and morality shows that morality is an evolutionary adaptation and that some species are *predisposed* to certain values. The descriptive account of morality does not provide any necessary statements for morality as a normative exercise. In other words, one could say that there are two ways of understanding the term "foundation of values", paralleling the descriptive and normative understanding of our embedment in nature. Perhaps Ruse does not consider the descriptive account of foundations of value predispositions to have any relation to values in the normative sense.

Unfortunately, Ruse does not explicitly (or implicitly) make any such qualification. Even if his statements were intended as such, it would still not be correct that values in the normative sense

do not have any foundation. According to the argument in chapter 4, 4.6, from the normative perspective, it is rational to refer to biology due to the fundamental value of life. The embedment in biology means that it is rational to value certain functions and to actualize certain predispositions if agents want to sustain life and fulfil other goals. Even if the evidence of our predispositions being founded in biology is *not an argument* for stating that we should follow these foundations also in a normative manner, it is a *manifestation* of the very fundamental embedment in nature which does have normative implications. Both the descriptive and normative accounts refer to the phenomenon of embedment in nature captured by the evolutionary framework, although in different ways. Thus, the normative understanding of embedment in nature can be understood to define the notion of foundations of values or morality. In fact, the proposed normative understanding complements Ruse's descriptive account by explaining why we chose to respect this evolutionarily embedment in nature, thereby also explaining why his descriptive account is relevant to understanding values. Ultimately, the outline of descriptive and normative understanding of embedment in nature proposed in chapter 4 can otherwise be understood to also characterising the concept of foundation of values according to the very same approach.

The normative understanding of our embedment in nature suggests that the term "foundation of values" refers to *reasons* for accepting some aspects of the evolutionary design and our embedment in nature. It concerns reasons that urge the valuer to refer to nature. However, it does not mean that it is reasonable to follow every predisposition, nor is following every predisposition imposed on us. The descriptive and normative understanding of embedment in nature, or foundations in nature, manifest *that* we value biological design (descriptively) and *why* the biological design is relevant to autonomous valuing (normatively). Within these foundations, agents have a considerable range of free action. Thus, according to this understanding, the statement that values are founded in biology or nature does not imply that values are "cast in concrete" and imposed on valuers to the extent that the roles of subjective states, autonomy and reasoning become overshadowed. Values are founded in biology not (only) because we *have* these predispositions, but because it is our rational choice to value them and to consider our biological design.

Indeed, the normative understanding of "foundation of values" should be considered as principal because it concerns genuine values, not value predispositions. However, since this interpretation is entirely aligned with the evolutionary framework and can be reconciled with the descriptive understanding, accepting the primacy of the normative understanding cannot be the reason why Ruse rejects the notion of foundation of values

Indeed, Ruse's rejection of the idea that values are *founded* is *not* motivated by a hidden or implicit differentiation between the descriptive and normative approach as the philosopher does not distinguish these approaches. Nor does he explicitly and consistently qualify that his account is descriptive. In fact, as discussed in chapter 5, 5.2.3, Ruse conflates the descriptive and normative approach by suggesting that biological ends of organisms are their *values*. For example, with respect to goal-directedness, Ruse suggests that evolution "designs" our values and "values" of other animals because, as the author claims, they are aligned with the needs organisms (5.2.3).

The reason why the author rejects the notion of foundation of values or morality is due to his specific understanding of this notion. Considering his discussion of Platonian, Aristotelean and Kantian frameworks (see chapter 2, 2.2.3.4.1), it is clear that the position has a different origin. Namely, Ruse understands the concept of "foundation" and objective values in the dualistic manner, as referring to a god-like source beyond nature that defines objective values for humans. It is associated with the dualistic notion of the designer, as described in the previous chapter. In this understanding, "foundations" are necessarily binding and imposed on valuers. This concept can be seen as undermining agents' autonomy. Unlike Putnam, Ruse does not reject this interpretation altogether. The author accepts it as a possible understanding and rejects the notion of objective values and foundations. Thus, Ruse's view not only clearly contrasts with the understanding proposed here which refers to a *reason* why valuers should, to a certain extent, consider their grounding in biology. It also contrasts with Putnam's understanding of objective values, as discussed in chapter 2, 2.2.3.4.2.

Ruse claims that "what the modern scientist denies is any kind of absolute or overall (externally conferred) value to the world" (2017, S. 101). This is a clear sign that the characterisation of objective values and foundation of values as "absolute or overall (externally conferred) value", as value originating in a god-like source beyond nature, defines his understanding of these concepts. is also evident when Ruse claims "when I say ethics does not exist, of course it exists for us, but it does not exist as some kind of objective phenomenon irrespective of human beings" (1984, S. 13).

Moreover, the author addresses this view with several objections. Ruse sees no value in the concept of objective values understood as values given by God, which for him is how to understand the concept of objective values. Ruse states that "the universe without the objective morality functions just as well as the universe with it. But surely, this is a contradiction, at least as the notion of objective morality is commonly understood. If there's one thing an objective morality cannot be, it is redundant. If it is God's will that we should love our neighbour, it

cannot be immaterial to us humans that it is indeed God's will that we should love our neighbour. This is what makes it right and proper for us to love our neighbour. What I argue, therefore, is that even if one supposes an objective morality, it is going to be redundant, given a Darwinian background, and that this is a reductio ad absurdum of the very notion of objective morality" (1984, S. 15). According to the author, there is no real explanatory power for the origin of values in the concept of divine source external to nature. Perhaps the only practical purpose of a concept of God is to reinforce moral norms.

Another hint to Ruse`s understanding of values as objective is his following reference to Jean Paul Sartre: "I have always found inspirational Jean Paul Sartre's little essay Existentialism Is a Humanism, based on a lecture given in 1945. He tells us that existence precedes essence and that, in a world without God, we must do the creating ourselves" (2017, S. 227). The quote which Ruse takes as inspirational begins as follows: "There is no human nature, since there is no God to conceive of it" (2017, S. 227). Of course, the reader is urged to ask: why does Ruse considers the understanding that, literally, God has to conceive human nature, given the evidence about origin of human nature in evolution? However, if for Ruse this is what it means that values have a foundation, then it is easier to understand why there can be no foundation, according to the philosopher. The only alternative view of values Ruse can accept, is that they are *projected* by valuers. Projectionism, which Ruse embraces, correctly captures the dependence of values on valuers. However, without further qualifications it is difficult to reconcile it with the grounding of values in evolution which Ruse also advocates (see 6.2).

It is evident that Ruse understands objective values as permanent, never-changing, "cast in concrete" set of moral values and norms originating from a divine source beyond nature. For the philosopher, the fact that the content of morality is dependent on biology (in a descriptive manner), or more precisely on evolution, and is variable according to it (as well as according to other factors such as external cultural) "is obviously quite inconsistent with the notion of morality as a set of objective, eternal verities. Morality is rooted in contingent human nature, through and through" (Ruse & Wilson, 1986, S. 186). If morality originated in a divine source, it would have an unchanging content. However, "ethics, in short, is contingent. It is a happenstance facet of our primate nature and, as such, can have no eternal underpinning. This denies it the special status that it is always accorded by those who argue for an objective ethics, with a reality in some way independent of, or transcending, human existence" (Ruse, 1984, S. 14). This is why Ruse and Wilson (1986) say that it is "entirely correct to say that ethical laws can be changed, at the deepest level, by genetic evolution. This is obviously quite inconsistent with the notion of morality as a set of objective, eternal verities" (1986, S. 186).

Value predispositions are dynamic and changing because they are predisposed by the per-definition-changing evolution at the genetical level. One may add that the variability concerns not only the descriptive understanding of biological predispositions but also values, norms and morality as seen from normative perspective. Our moral conceptions change on the collective level. For example, this is the case with regards to what is socially accepted, such as our perception of rights of different social groups. Moral conceptions also change at the individual level with regards to how individuals perceive certain values in the course of their lifetimes. This variability is directly attributable to the autonomy of agents to choose and change their opinions based on changing reasoning inputs and circumstances.

From the perspective of evolution as the foundation of values alone, the changing nature of value predispositions would not be problematic. For something to have a foundation does not necessarily mean that it does not change. Indeed, the change happens *according to* these foundations, as Ruse himself describes. Value predispositions are entirely dependent on the evolutionary design which means that they are *founded* in the evolutionary design. Thus, also this non-permanent nature of values and value predispositions leads Ruse to believe that values cannot be given by a god-like source, which for the author means that they cannot be objective and that there are "no foundations" of values.

Ruse claims that values and norms only *appear* to be given by a god-like mysterious source beyond us because we seem to recognise many values, *as if* they were given. These, however, are *evolutionary suggestions*, rather than divine suggestions. This is why the author continues that morality "has no further ultimate end" (1984, S. 13) (in the sense of an end beyond nature such as leading us to life after death or being God's plan), than to help us cooperate in order to survive. He urges that "this conclusion about the lack of objective foundation to ethics ought to be apparent to you already. As we have seen, what the evolutionist claims is that morality exists as a collective illusion, in order to facilitate cooperation amongst humans. It is an adaptation, brought about by natural selection, to help us survive and reproduce (…)" (1984, S. 13). In his most recent work Ruse further reemphasizes this: "ethics is an illusion put in place by natural selection to make us good cooperators" (2017, S. 219).

Studying Ruse's work leaves the reader no doubt that his concept of objective value, and what it means that values and morality have foundations, is indeed to be understood as a reference to a god-like source beyond nature. A designer beyond nature is understood to produce a transcendent set of norms available to valuers in some sort of self-evident manner. However, for Ruse, it is an illusion that such a divine set of moral norms exists because these "norms" are nothing more than biological predispositions developed by evolution.

It should not be surprising that Ruse is not comfortable with the dualistic understanding of objective values. Next to the fact that it undermines the autonomous aspect of valuing, empirical methods cannot be reconciled with the idea that values are given by a god-like designer beyond nature. This would be inappropriate for an empirical investigation. It is implausible to address questions about a mysterious divine source beyond nature with this sort of inquiry because it is impossible to test the existence of such a source. Such more would even be questionable in contemporary philosophical work. What certainly is and will remain unclear, is the question why the philosopher did not attempt to reinterpret this implausible understanding of values as objective and why he conformed to this framework which is strikingly incompatible with references to biology that he offers. The rejection of the idea of foundation of values or morality as opposed to defining or redefining this concept reveals that Ruse's work is in need of better tools to capture the concept of values and their relation to biological facts while maintaining the role of human autonomy in valuing.

The approach proposed here involves a differentiation between the descriptive and normative understanding of embedment in nature leading to a specific definition of "foundation of values". The descriptive understanding of this phenomenon, the account of biological predispositions, is only a manifestation of the embedment in nature. It may account for predispositions but not for "genuine" values. More importantly in philosophical terms, the foundation of values concerns the *reasons* why it is rational for valuers to embrace their embedment in nature as well as biological functions and predispositions, at least to a certain extent. It is not a dualistic conventional "cast in concrete" idea of values necessarily imposed on valuers but rather a *general objective framework that partly indicates what is rational*. Within this framework, valuers have autonomy in reasoning and choosing what they consider rational.

6.2 Ruse's projectionism in the light of empirical evidence

While Ruse (2017) argues for values' (or, more precisely, value predispositions') foundation in biology or evolution, he denies that there are foundations of values understood in the sense of dualistic objective foundations: as a transcendent set of values given beyond nature and imposed on valuers undermining their autonomy. As the author rejects the dualistic understanding of foundations and objective values, Ruse clearly resorts to the alternative view that he considered viable: projectionism. However, projectionism in this context does not solve Ruse's problems. It only moves his position further away from sound explanations of references to biology in valuing.

Rejecting the notion of values as objective and founded in anything, Ruse strikes a familiar note to the position of Kant as referred to previously by Callicott (2012). The author claims that the notion of objective morality and values, i.e. given by an external source, is an illusion because values are projected by valuers. This is clear from the following quote: “It is as much a chimera as the voices that the schizophrenic "hears", or the messages which come from beyond at the spiritualist's seance. What makes ethics different from the schizophrenic ' s voices and the spiritualist's messages is that it is an illusion shared by us all” (Ruse, 1984, S. 13). Projectionism highlights the act of valuing as an epistemological exercise of the valuer to which the act of “projecting” values refers. Because all valuers project similar values, it is a universal shared collective illusion.

Despite the fact that the concept of projectionism can highlight agents’ autonomy in valuing, Ruse binds it with biological design. He states that morality “exists as a collective illusion, in order to facilitate cooperation amongst humans” (1984, S. 13) and it “is an illusion put in place by natural selection to make us good cooperators” (2017, S. 219). What valuers project is put in place by natural selection. This is a peculiar interpretation of projectionism that, paradoxically, fails to highlight agent’s autonomy and overshadows it with biological background. While it is possible to speculate why Ruse rejects the idea of foundation of values and objective values, due to a specific understanding of these concepts, it is difficult to understand why the philosopher advocates projectionism only to equate values with biological design. Thus, even Ruse’s application of the concept projectionism seems to imply a necessary grounding in biology.

As discussed in chapter 2, 2.2.2, subjective view of values, including projectionism, can be objected to due to the implication that values are arbitrary, relative and created “out of thin air”. As a result, without further qualification it is unsuitable as a basis for a moral theory that would promote objective values. The rejection of value’s grounding in anything than valuer’s act of valuing creates a significant gap because the view falls short of explaining why we refer to biology, embrace biological functions and predispositions, why it is rational to do so and why this phenomenon applies to all valuers. In other words, projectionism falls short of recognising and explaining references to nature in valuing and normativity. Nevertheless, the view highlights the importance of the epistemological process of valuing as an act of the valuer. Perhaps it suffices to suggest that it falls short of explaining the ontological questions about references to facts present in their content because its major concern is of epistemological nature.

To close this gap, as described in 2.2.2.3, Kant refers to shared human nature which explains possibility of objective vales and their universality (Callicott, 2012). Ruse (2017), too, could be seen as facing this familiar problem: explaining *why* there is a collective illusion. Linked with evolutionary evidence, it suggests that it is a collective illusion *because* of our nature, embedded in biology. As discussed above, Ruse's references to biology, evolution and natural selection are made in a much stronger tone, by equating values, morality with biological predispositions thereby entirely overshadowing the epistemological process with references to nature. Such peculiar version of projectionism fails to capture human autonomy in the epistemological process of valuing. And yet, Ruse not only does not take this opportunity to explain references to nature and the objective nature of values, but he even rejects such view of values and the idea that values can have any foundations .This shows that, also despite advocating projectionism, his position fails to strike the balance between both capturing the epistemological process of valuing and the ontological relation of fact and value evident in references to nature. One could also say that Ruse's choice of projectionism is interesting in the first place, as it is not concerned with ontological questions about values' relations to facts, while precisely such questions can be explored with the analysis of evolutionary framework.

Because Ruse (2017) does not reflect on fundamental questions linked to the relation of fact and value in the light of understanding our embedment in nature (descriptively and normatively), it is not surprising that also his projectionism, as an alternative to dualistic understanding of objective values, has a weak application in this context. Ruse's confusion is evident in his discussions about Kant and Darwin where he conflates biological and human purpose (2017). According to the philosopher, despite having proposed the heuristic framework, Kant was still uncomfortable as he could not explain why there is a design, purpose and final causes in biology, if they are not to be linked to God. Kant recognized that, despite the fact that a heuristic position disqualifies the idea of externally given values and purposes (or, objective values), it does not change the fact that biology continues to act in a purposeful manner that is relevant to our values. As Ruse does not differentiate the two types of purpose, he also does not clearly see that human purpose may involve references to biology in the context of values, but biological purpose as a subject matter of science is different because it does not involve values. The author offers an unconvincing claim that Darwin proposed a solution to Kant's problem without recognising that while Darwin is concerned with biological purpose, Kant explains human purpose, i.e. why in valuing we refer to nature. "Darwin was ahead of Kant. The philosopher pushed God out of science, but he still didn't know why biology

demanded final-cause explanation. (…) Darwin gave a scientific explanation of final cause—of the purposeful nature of organic characteristics—without reference to God (or to Aristotelian self-organizing forces) and without having to suppose that God (or such forces) were hovering unseen in the background" (2017, S. 88).

Ruse uses these words in a quite unclear manner as he asserts that Darwin managed to explain purpose without reference to God while Kant could not. The reason why Darwin did not need to relate to a god-like designer is that Darwin did not attempt to explain *values*, but biological design. Ruse states this himself: "he [Darwin] wanted a purely naturalistic understanding of purpose—of final cause, of teleology—and he provided the tools to get this. Natural selection explains purpose at the individual level" (2017, S. 90). Darwin, unlike Kant, was concerned only with purpose in biology as a science, an account of facts and regularities, whereas Kant wanted to explain references to biology in valuing and normativity present in human purpose. Biological purpose, as a subject matter of sciences, involves no references to God or values. Thus, Darwin did not really explain "why biology demanded final-cause explanation" in a way that usually bothers philosophers, i.e. why we *value* biological functions, why we choose biological final causes to be *also our* final causes; why biological purpose is aligned with human purpose, facts with values; in short – why there are such parallels between biology and our valuing. In contrast, as a philosopher, Kant was concerned with explaining precisely these philosophically puzzling phenomena concerning the *alignment* of biological and human purpose and why in valuing we make references to biological facts. While projectionism explains human purpose with reference to the valuing agent, where the valuing agent is the designer of the projected value and purpose, Darwin explained biological purpose with reference to evolution as a science.

Thus, Ruse's comparison is unfitting, although he is unable to recognize this. Darwin did not solve Kant's problem and the two men were concerned with two different phenomena. Perhaps accepting projectionism means that one does not need to ask ontological questions about *why* we value as we value because of the epistemological focus. Perhaps, it should be understood that the involvement of a subjective projection is "simply" entirely based on subjective states of a subject, whatever they are (although still, the gap concerning why we universally refer to nature remains). However, it does not mean that the same applies to biological purpose as it is difficult to deny that it is an ontological phenomenon. In order to do so, one must deny – as would be unfitting to Ruse – that science and empirical study of the world gives us any understanding of this world.

Projectionism captures the idea that valuing depends on valuers. However, since it does not necessarily refer to ontological phenomena, its explanatory power is reduced. It has little added value for accounting for why valuers refer to biology, whether and when it is rational. Even though valuing as an act depends entirely on the valuer, the content of values shared by all humans relates to biological facts due to our embedment in nature. This reveals the ontological relation between biological facts and values which should not be discarded as trivial.

There is another problem with projectionism as a theory that is seen to explain not only the epistemological process of valuing but the entirety of the phenomenon of valuing. Empirical evidence, such as that provided by de Waal (2006), leads us to understand certain fuzziness between valuing and goal-directedness, such as in case of other species (see 4.3.1). However, projectionism clearly manifests a tendency to see the world through the perspective of what it is for *us* to value. This is evident is some of Ruse's writings: "I argue that once you have given a Darwinian explanation of moral beliefs, you see that there is no foundation. Morality is a set of subjective beliefs, not a reflection of objective, *human-independent* reality" (2017, S. 219) or "this denies it the special status that it is always accorded by those who argue for an objective ethics, with a reality in some way independent of, or *transcending, human existence*" (1984, S. 14). It prevents us from observing that our values may be founded in something beyond our subjective states. Suggesting that the content of values is entirely dependent on the valuers' mind, it may exaggerate the nature of these subjective states as distinct from natural or biologically predisposed states.

The quote shows that Ruse (1984) refers to objective values as *human*-independent reality, even though the philosopher elsewhere argues that other animals are capable of valuing (see the discussion on goal-directedness in 5.1.2.1). It is inconsistent for the author to refer to valuer-dependent reality as human-dependent reality, given that Ruse represents the view according to which *valuers* are not only humans but also, at least, other animals. It is easy to make this mistake, precisely because *valuing is attributed to humans*: values are indeed created in the minds of valuers in epistemological processes. Humans clearly *confer* values because, unlike many other animals, they value in a conscious manner. As valuer-reality, human reality is very rich as it consists of different kinds of values, not only values that refer directly to biological facts. While we value consciously and can decide against values, most animals pursue their ends as needs or goals in a much more direct and passive fashion.

Again, projectionism rightly highlights this epistemological process of formulating values, which clearly is specific to humans. However, there is the danger that this differentiation prevents one from observing that despite the capacity to value, humans are natural beings. Even

the capacity to value is an evolutionary adaptation. Our subjective states may be nothing more than biological predispositions. Ruse's example shows that projectionism has led him to assign such a strong meaning to human reality and valuing that his non-anthropocentric interpretation of values has suddenly become anthropocentric. All this shows that despite important emphasis, projectionism is problematic as long as it is not supplemented by an explanation of ontological phenomena evident in valuing and their references to facts.

6.3 Alternative interpretation of values as subjective and objective

The discussion of Ruse's view of values (presented particularly in "On Purpose" (2017)) should suggest that a reinterpretation of subjective and objective nature of values is necessary to accommodate a more precise understanding of the fact-value relation. It was shown that a mixture of traditional dualistic framework regarding the understanding of values as subjective and objective with descriptive and normative references to nature produces neither a solid nor a persuasive account.

6.3.1 Subjective and objective aspects of values reconciled

It should be clear that projectionism is very appropriate in terms of epistemological understanding of the process of valuing, however it needs to be supplemented by further elements that account for values' ontological relation to biology. At the same time, it should be safe to state that the rejection of an objective view of values according to which there is a transcendent set of moral rules given by a mysterious source beyond nature is rather uncontroversial. Given what we know about the world through empirical inquiry, as Ruse (2017) correctly arguments, it is not necessary to involve reference to transcendent sources of values, or to believe that values are "cast in concrete". Ruse falsely concludes from this that values cannot be objective which leads to striking incoherencies within his own views. Putnam's solution which involves *revising* a conception of objective values is more appealing.

The approach to understanding the nature of values involves reinterpreting what objective values mean but also, in a broader context as was argued in previous chapters, it involves rejecting dualism between fact and value, body and mind, and what follows, subject and object. Rejecting dualism does not mean moving to the opposite extreme by claiming that facts and values, subjects and objects, are "merged" (Putnam (2002) or Fuller (1958)). Rejecting dualism means rejecting the idea that two concepts cannot ever, in any way be related. This does not mean, however, that they are not different and that in some ways they are distinct while in other ways they are related. Two concepts can be different, but in certain contexts they can be related

or linked. There are many ways in which we can understand a "relation", "connection", "link", etc. Distinguishing epistemological and ontological perspectives of this relation allows to capture the epistemological valuer-dependency and the ontological reference to nature without involving problems present in projectionism and in the dualistic view of objective values of values as a transcendent set of norms.

The rejection of dualism with regards to the fact-value relation means that it is possible to also non-dualistically reinterpret subjective and objective understanding of values. Values have both subjective and objective elements: despite the fact that values refer to biology due to our ontological embedment in nature, they only become values once they are epistemologically actualized (formulated, produced, embraced) by valuers. Values are values because they are subjectively valued, i.e. that they are embraced by a valuer. Values are to some extent founded in biology, due to the fact that biology defines how we can pursue the fundamental value of life and so warrants objective references to biology. We actualize and should actualize certain biological predispositions due to this embedment in nature, but it is not always rational to actualize all biological predispositions. We do exploit the opportunity to exercise our autonomy in this respect. Both subjective and objective views of values capture different, epistemological and ontological, characteristics of the concept of value. In contrast to the dualistic understanding, they should be reconciled as neither view can exclusively nor sufficiently capture the concept.

This understanding was already promoted in chapter 2 and at this point it is possible to fully embrace this interpretation. The reinterpretation can be demonstrated by analysing another Godfrey-Smith's puzzle about the question whether values are subjective or objective. The philosopher states "It is a striking fact that it seems impossible to imagine what it would be for an item to have value and not to value that thing. And this might be taken to suggest that values depend on valuing, and so to lend plausibility to an anti-realist view of values. But while there does seem to be some absurdity in claiming both 'X has value' and 'I do not value X', it does not follow that 'X has value' means 'I value X'. Valuing X is an inseparable accident of discerning that X has value; just as even though 'p is true' does not mean 'I believe that p', believing that p is an inseparable accident of sincerely affirming the truth of p. If an item has value it will follow that the item is one of anthropocentric concern, but it does not follow that it has value in virtue of being an item of anthropocentric concern. However even if we waive this point, and say that having value does depend on being valued, it would still not follow that the sole reasons or grounds for valuing items depended somehow on the properties of the valuers" (2005, S. 320).

Is it possible that an item has a value but is not valued? Obviously, an item can have a value for person A but not be valued by person B. However, this is likely not what Godfrey-Smith meant. Godfrey-Smith asks whether it is possible that a value *exists*, as in ontologically, and independently of being valued by *anyone*. The author understands that, according to an objective view of value from the traditional dualistic perspective, value *literally* exists beyond valuers, rather than being dependant on their act of valuing or embracing a value. As the philosopher admits the "absurdity" of the claim that "X has value" while stating that "I do not value X", it means that he recognises the absurdity of such a conception of values because values require *the act of valuing*. This is further emphasized in his differentiation of the fact that "it does not follow that "X has value" means "I value X"". The observation that "Valuing X is an inseparable accident of discerning that X has value" is clearly an emphasis of the subjective aspect of values. What Godfrey-Smith tries to achieve with this quote, and what he does quite successfully, is to show that valuing depends on the subjective perspective of the valuer which is its epistemological feature that characterises the concept of value and distinguishes it from facts such as biological functions which exist irrespectively of values. This is very much in line with the arguments in this work.

Nevertheless, it remains true that we tend to say that "X has value" irrespectively of subjective perspectives and whether X is actually valued or not. This phenomenon is what Godfrey-Smith finds perplexing. It goes beyond reference to the epistemological act of valuing alone. As outlined in chapter 2, 2.2.3.2, it concerns the fact that values can be *prescribed* to valuers based on certain reasons and valuers *can be convinced* to value them. Now one may elaborate this argument why in this conception values are not irrelevant to valuers, nor are they detached from the act of valuing or embracing a value. We provide *reasons* that likely refer to ontological phenomena, in this context valuer's embedment in nature, that explain why certain facts *should be embraced*. We very frequently justify what is valuable and what should be valued as was done in reasoning models discussed in chapter 3. The reasons for something being valuable can convince or, in Hume's words "excite", the valuer to value it. It may *not follow* from a statement that "X has value" that A values X but if X really is rational to value (it is valuable), then A *should* value X and may become convinced to embrace this value. As this is a proposal of something which is valuable, rather than something that is valued, one does not have to claim that values exist beyond *being valued*, thereby solving Godfrey-Smith's puzzle.

This means that when reasons are provided that "X has value", as in Godfrey-Smith's quote, it is more appropriate and precise to state that reasons *justify* that "X should be valued" or that "X is *valuable*". It is not to state that value exists independently of the epistemological act of

valuing. It is to emphasise that a value *becomes* a value following this act *because* there are certain ontological characteristics that urge the valuer to embrace certain facts or characteristics as values. In terms used in chapter 2, this shows that the phenomenon of valuing involves both subjective evaluation and objective evaluation which can be reconciled and are complementary to each other. Subjective evaluation is about embracing values and "evaluating" in the sense of formulating, producing, embracing or conferring a value as an epistemological exercise motivated by subjective states. Objective evaluation is about evaluating such values against certain objective standards such as fundamental values which are justified with reasons.

There are clearly two levels, dimensions, or perspectives characterising the phenomenon of valuing and conflating them creates much confusion. Valuing is an epistemological act but there are some fundamental ontological characteristics evident in its content. It is highly beneficial to differentiate these two dimensions. Godfrey-Smith does not adopt this differentiation which is why he is perplexed about the statement "X has value". "X has value" is ambiguous because it can mean both that somebody values X, or that X is valuable.

Due to its non-dualistic character and rejection of radical differences between mind and body, human and nature, this account owes an additional explanation. The conceptual simplicity of dualism offers a clear line between human valuing and the rest of goal-directed phenomena of organisms. However, the recognition of the continuity between mind and body, human and nature suggest that valuing is a more complex instance of goal-directedness that is present in other organisms. Thus, it is necessary to put valuing as an epistemological act in the context of human embedment in nature. This also involves recognising similarities and differences between human goal-directedness involving values and goal-directedness of other organisms. As previous sections showed, while human valuing is a human-specific phenomenon, evolutionarily-related organisms such as other primates are capable of acts similar to valuing and reasoning.

Indeed, even in a non-dualistic account it should be entirely possible to advocate differences between valuing and biological functions because logically and epistemologically these are very different concepts. Human valuing is specific to humans and is distinct from goal-directedness of biological functions in a Venus flytrap or from regular, functional and intentional behaviour of lions, rats or lemurs. Human valuing remains distinct from such functional or intentional goal-directedness of other animals even if behaviour of some primates is very similar to human valuing and reasoning. The fact that there are grades in conscious, rational and evaluative behaviour does not contradict the epistemological differences between *valuing of humans* and following biological functions in functional goal-directedness, as have

been argued in this work. This is because valuing is understood in a human-specific manner which clearly contrasts following biological predispositions, urges, needs and functions in rats, lemurs, lions or even other primates. At the same time, it cannot be said that this work has provided a sufficient analysis of the differences and similarities in valuing between humans and other animals. Thus, the question as to what extent other animals, particularly primates, can be said to value similarly to humans certainly remains open.

This point can be outlined while addressing the question whether values would disappear if valuers would disappear from the world. The recognition of the epistemological act of valuing means that if all agents capable of valuing were removed from the world, there would be no values. Of course, this answer depends on what agents are considered to be valuers. If humans were removed from the world, there would clearly be no values because only humans can value in the human-specific way. Similarly, if one asks whether, lemur-form of "valuing", a certain form of goal-directedness specific to the species of lemurs, would exist if lemurs were removed from the world, the clear answer would also be no. Moreover, the mechanisms that create value predispositions and embed (or used to embed) human valuers in nature would remain as well. Valuing species such as humans may emerge again according to the very same evolutionary processes and their action and behaviour would be embedded in nature in a similar manner. Maintaining their ability to act would depend on maintaining their life according to the biological design. This is why they would necessarily make references to these facts in their valuing. Of course, one could imagine a situation where valuers emerge by means of non-natural manners, not by evolutionary processes, and are not embedded in nature. However, this thought experiment involves too much fiction to make it irrelevant for this work.

6.3.2 Specifying the concept of objective values

Next to the fact that formulation of values depends on the act of valuing, another central element of the concept of values suggests that values that involve justified references to facts are objective and can be embraced and shared by all valuers (i.e. they are also universal). It is possible to have a common understanding of the good because many values *are* objective and universal. This is valid even if formulation of values depends on the epistemological act of each valuer individually. The explanation relates to our common biological origin: we share values and reasons that justify references to nature because we share rational human nature. However, there are also clear *reasons* for promoting values which are objective and universal: we need norms that guide our action well, given certain ontological facts about us, the valuers, relevant to our valuing. The objective understanding of the good allows Callicott's (2008)

parent of a smoking-teenager to reason with the teenager. They can argue that the teenager should stop smoking because smoking is deleterious to their health while good health maximizes their chances of survival and this allows the teenager to pursue values and realize their goals in life. This example demonstrates only the *individual* benefit of endorsing an objective understanding of a good. However, objective moral values and norms clearly involve further other-directed considerations. Objective values and respective norms regulate our relations and make sure we are rationally guided in action in relation to others. Thus, they allow equal opportunities in the pursuit of goals and values among all valuers and are of moral character.

Objective values can be universal and shared because they refer to objective and universal ontological characteristics pertaining to valuers which are shared among them because they belong to one species. Due to valuers' embedment in nature as species, the rational appeal to biological design is valid for all valuers. There are objective *reasons* for valuers concerning the fundamental intrinsic and instrumental value of life which makes such references rational and justified. We refer to embedment in nature because life has a fundamental value, and it makes sense for valuers to respect certain biological functions and even to reject others. The presence of such ontological characteristics is further emphasised by evidence discussed in chapter 4, 4.2.

Thus, values can be understood as *founded* in biology in this very general and proximate manner. The foundation means that there is an overall and very general framework towards which we should adhere because sustaining life and biological functions is a necessary condition of our functioning. Foundation in nature, in other words, refers to our embedment in nature as outlined in chapter 4. It does not follow that values are *given* beyond valuers, because, epistemologically, it is valuers who embrace and formulate them. Nor are they *defined* beyond valuers because valuers have the autonomy to reject the biological framework altogether. It only means that there are certain ontological characteristics that influence the understanding of the rationality of values. Foundation of values explains what is ontologically relevant to valuing: what urges the valuer to make references to objects, respecting the role of agents' autonomy.

Thus, objective values cannot be understood as a transcendent, permanent, divine set of laws imposed on valuers as already argued in 6.1. Nor does the understanding of objective values suggest that laws of nature translate into moral laws or that values correspond entirely to descriptions. Values cannot be values irrespective of valuer's act of valuing and the content of values is at the discretion of valuers. The understanding of objective values explains what

characterises their rationality given ontological characteristics, thereby accommodating the autonomous character of valuing *and* a rational reference to biological facts.
Moreover, it should be noted that this does not contradict the fact that there are values less directly linked to biology and that such values can be very different among humans. The scope of this thesis explicitly refers to biological facts and references to nature in valuing and normativity. Thus, it is also true, but not further pursued in this work, that there may be many ways of pursuing more and less fundamental values.

The fact that objective values require reasoning indicates a clear difference between valuing of humans and goal-directedness of other organisms. As such, the interpretation is aligned with Kant's notion of supervenience of values on rationality (Callicott, 2005). While pursuing our goals, even if within the overall biological framework due to the fundamental value of life, we employ rational capacities. We can reject value predispositions, unlike other animals, if we deem this rational. Rationality is an important aspect of human nature and of valuing. While this specificity differentiated humans from other goal-directed organisms, it does not make us unnatural.

Based on this, it is possible to clarify another of Godfrey-Smith's problems. The author states: "it is all very well to say that the assignment of a value depends on the objective fact of whether an item or act possesses a particular property which is taken to be valuable; but on what ground do we decide that the possession of a particular property is a matter to which we attach a value? Ultimately, it seems, we are going to be forced back to the basic intuitions about what we take to be values (…)" (2005, S. 321). It should be clear by now that such grounds involved here refer to the ontological relation of biological facts and values and human embedment in nature. However, it is worth pointing out that Godfrey-Smith's characterization is quite imprecise: the *ground* for being valuable is a *reason*, it cannot be an (unjustified) basic intuition. Unlike in the case of subjective values where valuing bases on immediate desires or sentiments, objective values necessarily require reasoning. Reasoning may involve references to subjective states, but it also involves references to objective facts that characterise ontological matters. Reasons explain why "the possession of a particular property" referring to such facts such can be rationally linked with values.

At the same time, it is true, as pragmatists observe, that reasoning can be imperfect, and it is a quality that depends on the skills of the reasoning agent. Just because humans have the capacity to reason, does not mean that they do it well. Godfrey-Smith is also aware of this: "The realist

account seems to suggest that we recognise or perceive values; and this opens the sceptical possibility that we might, in fact, simply be mistaken about what we perceive to be values" (2005, S. 322). It remains true that human reasoning is imperfect. We can be, and we often are, wrong about what should be valued, what is valuable. There are many possible causes of such mistakes. For example, we may easily misidentify what should be taken as the fundamental value against which we objectively evaluate. Throughout this work it has been argued that such fundamental value is the value of life. However, this work refers directly only to specific cases of reference to facts in valuing. Values are extremely diverse in terms of the content and the closeness of their relation to biology. Evaluating the rationality of values less directly linked to the fundamental value of life is a much more complex exercise that the exercises performed here.

In addition, there are many ways and many values that can help pursue fundamental values and it is difficult to objectively evaluate them as either good or bad in a black-or-white manner. Values may be rational, even objectively rational, from one perspective but not from another. This may differ from an individual and a collective perspective; a good example of these are moral dilemmas. Finally, failures in reasoning may also be linked with a poor quality of reasoning or even committing fallacies. Ethical questions remain extremely difficult although meta-ethical clarity with regards to fundamental issues such as a sound understanding the fact-value relation with regards to references to nature can be very beneficial in increasing the soundness of reasoning.

Encountering and dealing with such puzzles that require intensive reasoning processes, weighing of various arguments and making decisions that lead us to embrace certain values and norms is an integral part of our autonomy. This shows that *formulating* objective values and norms is clearly linked with valuer's autonomy and is not a given set of permanent and transcendent norms. From this epistemological perspective, Putnam makes a good point emphasising the epistemic quality of reasoning employed in formulation of objective values, or "warranted assertibility" (2002). In line with the pragmatist approach which focuses on *how* rather than *what,* Putnam's concept of objective value does not refer to the *content* of objective values but rather to the *process of arriving at this content*. Warranted assertibility is the methodological principle promoting high methodological quality reasoning about and formulating objective values. Pertaining to this principle is the idea that there are different interlinkages between different types of knowledge stemming from different types of statements:

“(1) Knowledge of (particular) facts presupposes knowledge of theories (under which term Singer included all generalizations). For example, to know that something is an oak tree is to know that it belongs to a kind of tree (a notion which is itself connected with many generalizations) that generally has leaves with a certain shape, that usually produces acorns, and so on. Here Singer was attacking the idea that science can “start” with bare particular data and build up to generalizations by induction and abduction. There is no such thing as a “start” in this sense, Singer was saying; we always already presuppose a stock of generalizations when we do science.

(2) Knowledge of theories (in the wide sense described) presupposes knowledge of (particular) facts. This would be denied by Kantians who would argue that certain generalizations are a priori.

(3) Knowledge of facts presupposes knowledge of values. This is the position I defend. It might be broken into two separate claims: (i) that the activity of justifying factual claims presupposes value judgments, and (ii) that we must regard those value judgments as capable of being right (as “objective” in philosophical jargon), if we are not to fall into subjectivism with respect to the factual claims themselves."

(4) Knowledge of values presupposes knowledge of facts. (Against all philosophers who believe that [some part of] ethics is a priori.)” (Putnam, 2002, S. 136 - 137)

Being aware of these interlinkages, as Putnam argues, improves the quality of our reasoning. These points clearly foresee that facts and values, as basic components of further and even more complex epistemological concepts such as knowledge and theories, are in many different relations to each other. Indeed, this has been demonstrated in chapter 3, 3.3.1, where it was argued that a logical and epistemologically-relevant delineation of concepts involved into reasoning increased the epistemic transparency of reasoning and facilitated understanding justified derivations. In effect, it was possible to illuminate the instances of curious and often misunderstood alignment of facts, values and norms, often proclaimed as “is-ought fallacies”. Nevertheless, Putnam’s perspective clearly concerns the epistemological understanding of the phenomenon of producing objective values. It does not focus on the content of such values, nor does it ask what the content should be, or what is characteristic about their appropriate content. It asks about how we should appropriately arrive at this content. As the analysis above has shown, there are certain ontological characteristics that explain the phenomenon of reference to nature in valuing, why such reference takes place and why it should take place. This explains that there is a certain anchor, or a general framework, concerning what defines rationality of values that could be understood as foundation of values. However, valuers are at a discretion

to formulate values that are either rational or not and they are not forced to any choice. Thus, this ontological reference in the understanding of the relation to facts does not undermine the autonomy of agents. Moreover, even if such an anchor specifying the rationality of values exists, there is nothing to suggest that objective values have *one* ideal content and cannot vary according to circumstances or perspectives. Possibly, there are many ways in which objective values can be rationally formulated. Moreover, because it is agents who perform reasoning processes, it is within their power to formulate a rational proposal, reflect on it and change it respectively.

It seems that not even Putnam could deny that there is an objective anchor in valuing. In stating that "my own answer to the question, 'Are values made or discovered," is the one that I believe John Dewey would have given, namely that we make ways of dealing with problematical situations and we discover which ones are better and which worse" (Putnam, 2002, S. 97) the author does not only shift the focus again from the content of values to the exercise of formulating values. He claims that via this exercise "we discover which ones are better and which worse" meaning that there must be some underlying fundamental (ontological) reference that *helps us* evaluate (and thereby discover) what is good and what is bad.

7 Conclusion and summary: an approach to understanding the relation of biological facts and values (and norms) in contexts involving references to nature in valuing and normativity

This work tackles a very complex and an often-misunderstood problem and attempts to provide an approach to capture it more precisely. On the one hand, we are embedded in nature. This means that being alive is a necessary condition for acting and pursuing values, whereas staying alive requires respecting certain biological functions and the biological design. On the other hand, we value and act normatively based on autonomous valuing, reasoning and decision-making, even in cases when we value biological functions.

We are largely aware of this dual phenomenon that demonstrates simultaneous differences and relation of biological facts and values. Yet, formulating and naming the relation between facts and values is a pertinent philosophical problem. Early in this work, this problem was introduced with reference to Hart (1961) and the natural lawyers (Orrego, 2004). Natural law theory is known for linking normative moral statements, involving values, with what is natural for humans, characterised by a factual account. Hart believed that the mistake of natural law theory is that it "(…) minimized the differences between statements of what regularly happens and statements of what ought to happen" (1961, S. 185 - 186). Natural lawyers, however, argued that they differentiate between, and do not equate "ontological" laws, as in when "we say that a stone thrown in the air 'should' fall" (2004, S. 292) and moral norms (""Among these many senses there is one concerning what 'ought to be' in the sense of being in accordance with the nature and the 'ontological good' of an entity, a sense of 'ought' which is not normative, for it refers to beings that move from necessity, not freely" (Orrego, 2004, S. 295)). The relation of the "ontological" laws captured by facts and moral norms involving values is indeed controversial and difficult to capture in itself. As chapter 4 showed, it is a complex phenomenon and this is linked to the need to respect logical and epistemological differences while accounting for it.

Orrego also refers to this as a differentiation between ontological and moral "goodness". The former represents an adherence to the descriptive laws of nature, as described with the reference to the stone. It is "good" *in the sense that* it corresponds to regularities. The laws that define the "good" are laws of nature. In contrast, moral "good" is a rationally justified value that is a central element of different laws, such as moral norms. Ontological "goodness" does not refer to a good that is a value but to a regularity and whatever adheres to that regularity is "good".

Such ontological "goodness" does not involve values unless a valuing agent attaches a value to it. For example, it may be *good for somebody* that a stone falls down. However, in this case, it is good that a stone falls down not only because it should fall down according to laws of nature but because it is good that it falls down *for the agent*. Similarly, my heart should beat (it is "good" that it beats) from the biological perspective because it fulfils its biological function. At the same time, it is *good for me* that my heart beats. In such case, there is an *alignment* between regularities captured by facts and values embraced by an agent. The two types of phenomena can be logically and epistemologically separated.

Using the term "good" in these two meanings may cause much confusion unless an explicit explanation is attached. Next to advocating an approach that differentiates between these two types of phenomena, this work also uses separate terms for them and refers to biological phenomena that do not involve values as biological purpose, with ends rather than goals or values. However, some philosophers choose to blur this separation as does Philippa Foot's "natural goodness" (2001). In a similar vein, also Ruse believes that evolutionary predispositions define final causes, goals and values in animals and in humans. Foot suggests that moral goodness (which includes final causes, goals, values) is connected to biological characteristics of human species ("'natural' goodness, as I define it, which is attributable only to living things themselves and to their parts, characteristics, and operations, is intrinsic or 'autonomous' goodness in that it depends directly on the relation of an individual to the 'life form' of its species" (2001, S. 26-27)). Both Ruse (2017) and Foot (2001) believe that species-specific biological characteristics define needs and values of individuals within species. In case of both authors, this applies to both humans and animals. Thus, in contrast to natural lawyers, Ruse and Foot advocate a reference to nature that focuses on *associating* rather than delineating biological phenomena characterised by facts with human valuing. Thus, their approach can be perceived to create even more confusion than Orrego's use of term "good" for both biological and human phenomena while still differentiating them.

Natural law theory, Ruse and Foot are only three examples of authors who advocate reference to nature in moral contexts. In this work, references were made to other authors such as Lon Fuller (1958), Holmes Rolston III (1975), Frans de Waal (2006) or Owen Wilson (2004). All of these authors succeed to varying extents in addressing criticisms, such as that forwarded by Hart, concerning lack of appropriate delineation between facts and values. Indeed, to a large extent, analysis of their works has been focused on highlighting the delineation between fact-

and value-related phenomena in their accounts of references to nature. In practice, discussing references to nature by various authors almost always resulted in having to highlight that valuing is an epistemological process autonomously performed by the valuer, even if it concerns embracing biological predispositions. More precisely, it had to be emphasised that biological facts are not values axiomatically but *become* values following an epistemological act of a valuer. Further, the consistent application of the approach has resulted in differentiating human valuing and biological design as a different type of phenomena that can be aligned. The discussions and applications of the approach against various authors should demonstrate the added-value of the proposal made in this thesis.

This task of highlighting the delineation between fact- and value-related phenomena in references to nature is closely linked to the is-ought problem which emphasises differences between facts and values as types of statement. Conflating facts and values may be perceived to be linked with the claim that facts about our nature define what we should value, or with a suggestion to derive value-related norms from facts. After all, Hart's (1961) criticism of natural lawyers is another formulation of the principle that *oughts*, or norms (more specifically moral norms), should not be derived from *ises*, or facts (such as facts about our biological characteristics). However, after analyses in chapter 3, it should now be clear that such moves can take place with an appropriate justification that involves values and reasons, or subjective and objective evaluation.

Both sides, those referring to nature (natural lawyers, Ruse, Foot, Rolston, de Waal, Wilson…) and those objecting it like Hart, have valid arguments. Despite being embedded in nature, which makes references to nature in valuing reasonable, we value autonomously, which means that we should highlight the epistemological differences characterising and distinguishing valuing from facts. The goal here was to find an approach to capture this phenomenon and accommodate arguments from both sides. The challenge was to capture why references to nature in valuing take place and why they should take place while, at the same time, maintaining epistemological autonomy of valuers and the logical differences between the concepts of values and facts.

Many layers of the problems related to the topic of this work were gradually exposed across the chapters. There is a number of crucial observations and points to highlight as central to arguments in this work.

Differentiation between epistemological and ontological level of the fact-value relation. The approach involved distinguishing between the epistemological and ontological understanding of the fact-value relation. Both of these perspectives help capture what characterises this relation, which explains why references to nature are made by valuers.

Epistemological perspective

Values, and respective norms, are logically different types of statement than facts. The logical differences between statements of fact and statements of value are linked to their epistemological functions and roles in the processes of reasoning, as well as with regards to how they are produced (formulated) in epistemological processes. They have asymmetrical relationship to producing norms in reasoning processes, as showed in chapter 3, 3.3. Values can lead to norms, but facts always lead to (valid or justified) norms only with involvement of values and/or reasons. Moreover, values and respective norms are characterised by being formulated by an act of a valuing agent which may involve reasoning. This contrasts with facts which describe ontological characteristics of the natural world. The content of these ontological characteristics is not dependent on valuers' formulation but on the biological design, including laws of nature. Unlike values, we *discover* rather than *formulate* the content of facts.

Due to these logical and epistemological differences, it is correctly argued by many (e.g. Hart (1961) as discussed in the introduction) that laws describing regularities of nature, such as those present in characterising biological purpose, cannot be equated with laws describing normativity in case of norms guiding human action. These differences with regards to operating statements of facts and evaluative statements (values and norms) in reasoning processes are also applicable in the context of understanding different types of purpose. Biological purpose involves only factual scientific statements, whereas human purposes involves evaluative statements, possibly made in reference to facts.

Ontological perspective

At the same time, despite the logical and epistemological differences between facts and values (and related phenomena such as biological and human purpose), their content reveals certain *alignment*. This alignment happens when, as an outcome of reasoning and valuing, we embrace and actualize predispositions and autonomously accept the biological design. Agents *choose* to value biological facts, and the explanation of this phenomenon pertains to the ontology of the natural world into which we are *embedded*. Despite being autonomous valuers, we are embedded in nature in the sense that being alive, which is a necessary condition for pursuing any goals, depends on the biological design. With reference to evolutionary design, both the

descriptive empirical account demonstrates this embedment while the normative account explains why agents chose to respect this design.

This understanding of the fact-value relation is referred to as ontological because it concerns fundamental, ontological characteristics that characterise the biological design that is relevant to how we value. It accounts for why valuers make references to facts and why such references make sense, thereby explaining ontological characteristics pertaining to our valuing.

References to nature involve objective evaluation by an autonomous agent with regards to the fundamental value of life due to our embedment in nature.

The ontological relation is manifested in examples of reasoning processes where a reference to nature is present. In the discussed context, the fundamental value, against which agents evaluate objectively, was identified as the fundamental value of life. The value of life is fundamental – as observed by many such as Foot (2001), Woodfield (1976) and Hart (1961)– it is intrinsic and instrumental because it allows to pursue any other goals. In order to maintain life, we must respect the biological design to a certain extent which is the reason why it is (frequently) reasonable to value biological facts**. Frequently, we make references to biological facts – such as the presence of biological predispositions or knowledge about our biological functions and biological design – because they help us pursue the fundamental value of life *and* any other goal.** In other words, because we are embedded in nature to the extent that biology defines how we can sustain life, **the fundamental value of life warrants references to nature.** The fact that in order to maintain life, we must respect the biological design to a certain extent, is referred to as the **normative understanding of our embedment in nature.** It highlights the *reasons* why biological facts become valued, or in other words, why valuing subjects refer to objects.

The is-ought problem as an important point in the epistemological perspective

The discussion of the is-ought problem was a very relevant element of the topic. It was argued that **the is-ought problem captures the epistemological level of the fact-value relation: it refers to how we should reason and formulate values and norms with reference to values and facts and *given* their logical and epistemological differences as types of statements, functions and how they are produced**. The analysis maintains these differences and promotes them throughout the analysis of references to nature.

The understanding of the "is-ought thesis" is frequently taken for granted and restated in a vague and imprecise manner. It constitutes a significant bottleneck to understanding the relation of fact and value because it promotes a radical, dualistic separation between values, norms and facts. Indeed, the confrontation with this problem was beneficial and allowed to

obtain a more precise understanding of circumstances under which norms can be derived from facts. It was shown that **valid derivations of norms from facts are mediated by values and reasons, subjective and objective evaluations**. **In cases where facts are derived from norms based on values and reasons, the agent embraces facts as valuable (based on reasons) and values them. In such cases, facts, values and norms are "aligned" and parallels between them are evident**. The analysis also revealed that the **reasons that bridge facts and norms refer to the underlying relevance of biological facts to our functioning, because pursuing the fundamental value of life depends on biological design**. This account acknowledges that reasoning and respective actualisation of such norms and values is a process that requires a capable (human) agent.

References to nature as a manifestation of the ontological perspective

It should be evident that this account accommodates and reconciles polarised arguments with regards to references to nature introduced previously. On the one hand, it explains why valuers make references to nature and how biological facts are relevant to valuing not only normatively but also descriptively. By discussing the role and the nature of scientific account of biological design, evolutionary framework and evidence about evolutionary adaptations and biological predispositions put forward by authors such as Ruse (2017) or de Waal (2006), it is demonstrated how such statements should be understood. In this context, it was highlighted that **explanations that highlight our evolutionary heritage indeed show our embedment in nature from a descriptive point of view, even though they have no necessary normative consequences**.

Evolution theory explains the overall biological framework of our embedment in nature and it provides the evidence of evolutionary background of human traits, including advanced mental capacities. It also explains biological predispositions to certain evaluative and normative conceptions via sociobiology and the study of similarities in social behaviour between primates and humans. By outlining evolutionary framework, such explanations *confirm* the biological design that anchors humans in the natural world and is the reason why we refer to nature. Evolutionary evidence about presence of some predispositions confirms this framework explanation of the biological design. Descriptive statements may manifest that humans are part of the natural world but they can be clearly delineated from the normative perspective which suggests why it is rational to respect this embedment in nature (as a *reason* concerning the fundamental value of life).

This presentation and interpretation of different scientific inputs provided in chapter 4 should also help accommodate the nature of statements made by evolution theory in a non-

controversial way. Such statements are often referred to by authors such as Ruse (2017) or Foot (2001). Without an explanation of the meta-ethical relevance of such statements, i.e. their descriptive character, they can be controversial if perceived to be linked with normative implications, the idea that such *descriptions* of our nature define what we should value and pursue. This problem may pertain to specific statements, which is why also such statements were analysed according to the proposed approach. For example, evolutionary evidence shows (descriptively) that pursuit of social relationships such as family or friends, or even basic forms of altruism is within our biological nature. However, this is not why we (normatively) think about values of friends, family or altruism, nor is it a reason why we value and why we should value friends, family or perform altruistic acts. Just because we evolutionarily tend to favour kin, it is not the reason why we should, or why we actually do, favour kin.

This dual descriptive-normative perspective on our embedment in nature explains why and how the ontological understanding of the relation of biological facts and values, accounted for with reference to a scientific account of biological design, can be captured in a manner that respects human autonomy.

Indeed, this ontological relation of fact and value is the reason why many authors advocate references to nature in moral contexts as it defines why biological facts are relevant to valuing. As a result of this, apart from Ruse and Foot who associate phenomena characterised by facts, such as biological design, with values, many philosophers argue that facts and values are "merged" ((Putnam, 2002) or (Fuller, 1958)), nature or natural facts "carry" values (Rolston, 1982), or values are "discovered simultaneously" with facts (Rolston, 1975). However, these are very imprecise formulations that cannot be expected to satisfy those who are concerned with the is-ought problem and the lack of emphasis on human autonomy

Against such characterisations, it has been strongly emphasised that **formulation of values and norms results from an agent's epistemological exercise rather than comes axiomatically with facts. It is valuers who attach values to facts, rather than values being "carried" by facts**. This emphasis was indeed necessary in case of several discussed authors. It is essential in order to highlight that references to nature do not have to minimize "the difference, so important in modern thought, between human beings with a purpose of their own which they consciously strive to realize and other living or inanimate things" (Hart, 1961, S. 185 - 186). Moreover, it is not only shown *that* valuers autonomously choose to make references to nature but also *why* such references are rational.

Epistemological and ontological relation of fact and value in the context of purpose

The approach to capturing the relation of fact and value has been discussed in the context of purpose. Evolutionary, biological design is purposeful and so is human goal-setting and goal-pursuit. Purposeful biological design consists in the fact that biological elements are functions subordinated to the ultimate end of evolution: survival and reproduction of species. Purpose in human action, referred to as human purpose, depends on the valuing agent and it their autonomous decision-making with employment of reason and values. In their purposeful action, agents may *refer to biological purpose* if they deem it relevant.

References take place because, to a large extent, both types of purpose are directed at overlapping ends and values in both types of purpose: survival and life. This largely explains the alignment of facts, values and norms. We have and value biological functions and predispositions and these are valuable for us in many circumstances because their function is to sustain life and we value our life. Even if we rationally decide to reject certain biological predispositions, we are still fundamentally embedded in nature with regards to the ultimate value of life. Hence, our embedment in nature is fundamental but proximate: it does not mean that we do or should accept all elements of the biological design. Within this embedment, we have much autonomy and freedom in deciding on how to act. We may even choose to not value life.

Implications for the concept of values as subjective and objective

While this approach accounts for why we do and why we should consider ontological characteristics such as biological facts relevant to valuing, it also has important implications for understanding the concept of values as objective. The understanding of the idea of foundation of values parallels the understanding of our embedment in nature. Particularly, the specific understanding of references to nature from the normative perspective should characterise what it means that values have foundations. It refers to reasons concerning the ontological biological design that urge the valuer to make references to objects (thus respecting the role of agents' autonomy). Such an account contrasts with the dualistic understanding of objective values as a set of transcendent "cast in stone" norms. It does not mean that biological facts define values or norms because it does not promote the idea of foundations of values as a direct "translation" of foundations into values. **Objective values involving references to facts are values that agents reason about and autonomously embrace based on their reasoning.** They are objective because they contain rational references to objective and universal *ontological* phenomena (objects) such as biological facts and biological design. They are not self-evidently known as transcendent set of norms but are arrived at by epistemological processes of reasoning.

All in all, this understanding of the fact-value relation suggests that epistemologically and logically, facts and values are distinct types of statements, but they are ontologically related, as evident in the fact that agents make justified references to nature. The relevance and the presence of a biological design discovered scientifically is acknowledged and appropriately accommodated within this account. Thus, this approach promotes a rejection of the fact-value dualism which is linked with the rejection of the subject-object dualism and a subsequent reinterpretation of values as subjective and objective. Against dualistic conceptions, it is argued that in valuing, valuers *autonomously chose* to refer to facts, *objects,* such as facts about our embedment in nature, because it is rational to do so. **In all relevant discussions, the autonomy of the agent is safeguarded, while their justified reference to biological facts is explained.**

This summary shows how one and the very same problem, the fact-value relation in the context of reference to nature, requires addressing a number of interrelated philosophical problems. It should be noted, however, that while the fact-value problem can concern all sorts of facts and all sorts of values, this work has focused only on *reference to nature*, more specifically, to biological facts. There are other types of facts that can be investigated in the context of the fact-value problem.

The suggested approach to capture the relation between biological facts and values could be understood as innovative because it reconciles various points about how we value and refer to facts. Authors frequently admit that life has a universal and fundamental value which is highly relevant to moral systems and further moral concepts such as human rights. At the ethical level, when concerned with *formulating* moral norms, we often do not engage with deeper meta-ethical considerations, as "*why* do we refer to such natural facts and what does it mean in terms of the fact-value relation?". This is likely the reason why Hart referred to some facts about relevance to nature to valuing and morality as "truisms" (1961). However, these meta-ethical concerns are substantial and important issues in themselves.

Indeed, at the meta-ethical level, the arguments made here should not be controversial. For example, Kant was largely aware of our embedment in nature, even before Darwin descriptively explained how we are embedded in nature with reference to evolution. As Liesbet Vanhaute points out, Kant recognized that humans have *natural predispositions* which interplay with reason. The philosopher further believed that neither natural predispositions nor reason alone have an exclusive influence on our decision-making, valuing and acting. In fact, Vanhaute argues, Kant thought that human development has a sphere of freedom which is delimitated by natural constraints. It is within our nature to develop rationality, both as species

but also individually, through the course of our lives (2011). Vanhaute writes: "(…) although predispositions do not automatically bring human beings to rational development, referring to reason as a predisposition does imply that the capacity for moral progress is deeply rooted in human nature. Just as a strain of wheat will always develop thick skin as a reaction to cold, human beings will always develop reasonable solutions when faced with problems – reason is simply the only means of solving problems" (2011, S. 161).

The presence of reason and rational considerations is what distinguishes us from "sub-rational" organisms. And yet, reason and autonomous choice are no less elements of human nature as our biological design is. Indeed, evidence shows that there is no unbridgeable gap between human and nature, mind and body as well as values and facts. As argued in this work, this empirical, biological account of agents can be accounted for philosophically in a non-dualistic manner. Reasoning and valuing may be as natural elements of human nature as intake and excretion of substances. Nevertheless, it is precisely reasoning and valuing that distinguishes our action, goal-setting and goal-pursuit, from goal-directedness of other organisms as it allows us to embrace or oppose things that are biologically designed. We do not just follow biological predispositions or functions, but we reason about and decide to value them or to reject them. Maintaining the differentiation between fact- and value-related phenomena, such as between the presence of purposeful biological design as opposed to purposeful human action and decision making in this context is a necessary element of the approach.

In understanding values and arguing for the relevance of nature to values and norms, many are concerned that reference to nature will deprive the concept of value of the importance of the meaningfulness of human valuing as well as will "hijack" human autonomy. This was clearly the concern of Hart (1961) who rejected reference to nature out of the concern that it equates regularities characterizing the biological design with human action and decision-making. However, the approach suggested here demonstrates how this balance between reference to nature and recognition of human autonomy can be met. Following the suggestion of natural lawyers, by differentiating the epistemological and ontological dimensions as well as separating dualistic conceptions, this interpretation maintains an important role for human autonomy and rationality. It also comprehensively engages into understanding of the ontological relation of fact and value by facing and meta-ethically interpreting the relevance of scientific statements.

Accounting for these meta-ethical issues does not guarantee that ethical questions will not be challenging although it may aid in reflecting on them. It offers epistemic clarity and a way to understand the different interdependencies. In addition, it also informs our reasoning with

knowledge about our natural background. It seems that Kant would have agreed that understanding of the descriptive nature of moral questions can have benefits for normative reflections and reasoning. As Vanhaute claims, Kant believed that human history can be understood as a process of moralisation. By introducing understanding of "historical" biological background of human, it "fulfils the function of moral anthropology: it confirms the possibility of realizing pure ethics by studying a characteristic of human nature that proves to be the answer to an epistemological question and which can thus be observed independently of moral assumptions" (2011, S. 163). In the context of this work, this corresponds to the differentiation between descriptive and normative approaches to morality and moral questions, which is related to the differentiation between ontological and epistemological perspective on the fact-value relation. The knowledge about our biological design does not *define* what we should do can *contribute to a more informed reasoning* about should be done as it provides knowledge as an input to reasoning. Such an example was discussed with regards to Nussbaum's consideration on anger (Nussbaum, 2016).

Meta-ethical considerations help achieve better epistemic clarity about how norms are formulated. They can help avoid fallacies and contribute to deriving robust conclusions, in line with Putnam's argument (Putnam, 2002). Achieving a sound understanding of the relations of biological facts and values in contexts involving references to nature in valuing and formulating norms is an important step towards understanding if and when such references are rational in terms of moral questions. The approach proposed here accurately elucidates why and how agents refer to nature, with consideration of the epistemological character of such references and ontological relations manifested in the choices made by agents. This emphasis on the epistemological process and maintaining the delineation between facts and values helps understanding when such references are justified, thus respecting the is-ought principle. It provides a comprehensive framework regarding the relation between biological facts and values that address most pressing points and concerns pertaining to references to nature, why we make them and why we should make them.

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